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Christian Faith and the New Psychology

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Evolution and Recent Science
As Aids to Faith

By

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Preface

THESE essays attempt to face some of the newer developments of science from the standpoint of a living Christian faith. Science is constantly advancing, and the discoveries of a few years often necessitate an entirely new outlook upon life. This was true of the great law of evolution. It seems to be nearly as true in the field which is being explored by the new experimental psychology. The author has tried to take his viewpoint from the advance line of both these studies, and to ask himself whether the old faith in God, Christ and the Bible is still possible. It will be gratifying if we find that the deep excavations of the new science, instead of undermining the old foundations, only show that they reach down to the everlasting rock.

It is recognized by all thinkers that there must have been some kind of an extra-mechanical agency or "First Cause" operating at the beginning of the present great universe process to originate or start it. But what was its character? That is the real problem.

That agency must have been an agency similar to the spirit of man because the thing that it must have done is something that no other known agency in the universe is ever known to do, but it is precisely the thing which just that one agency, namely the soul or life principle of man constantly does, and which it is its specific nature to do.

In every act of volition by man, the will or spirit

of the man, somehow, somewhere,—in some central brain cell perhaps,—so controls some quantum of energy that it comes into activity at just a certain given time, and not before or after, whereas left to itself, without that control, it would not have done so.

The problem of creation as science sees it is not to account for the existence of matter and energies, for that is conceded impracticable, but to account for the great process of progressive activity beginning,—that is to say beginning at just the point of time to bring it to the present condition at the present time. The act that the spirit of man does in volition, as noted above, is an act on a small scale of precisely the same character, namely, starting a train of activity. This, therefore, shows what kind of an agency would be capable of doing that kind of a thing. It therefore shows what kind of an agency the "First Cause" must have been.

The teleological argument, in the form stated by Paley, has become invalidated by evolution. Things have become what they are because of their environment, at least in part. They have run into it and been moulded by it, as the melted metal is shaped by the mould into which it runs. But where did that mould come from? There is the argument and the significant evidence of teleology. Only by the coöperating and coördinating of hundreds of diverse conditions has this evolved product been made possible. A slight change only in any one of these hundreds of conditions would have rendered the high result impossible. How does it come that just

the right selection and arrangement of conditions was furnished? There is the real proof of design.

Many psychologists who have made a special study of that phase of the subject are convinced that thought transference from mind to mind without physical agency is sometimes actually accomplished. When so accomplished the person receiving the communication is preferably in that peculiar secondary mental condition in which the so-called "subconscious" is dominant, of which familiar instances are trance, ecstasy, the hypnotic state, and perhaps common sleep. Now this is precisely the state in which the prophets and others were reputed to have received communications from God. Thus, while the mere fact of a trance or vision is in itself a natural psychical phenomenon, and not, as once believed, a supernatural, objective appearance of God or of some other person, yet on the other hand, that state is precisely the condition in which a communication from God would be likely to be received if it were to be received. And moreover it would be quite in accord with our latest studies as to the powers of the mind in this "subconscious" condition if it did thus receive direct communications from the mind of God. This principle has application not only to prophecy and inspiration, but also, in a modified form, to the influences observed in modern revivals, and to the continual guidance given by God's Spirit to all Christians.

Evolution is not a finished process that has reached its zenith in man, nor is its work confined to perfect-

ing the physical organism only. It has a future course yet to ascend. And it is equally concerned with the psychical nature. Indeed in its higher ranges in man that is the most important part of its work. In this respect evolution in knowledge is important, but even more important is evolution in all those personal and social traits which we may group under the title of "Fellowship." The next advance step to be achieved in this line is evolution into the possibility and practice of fellowship with God. A race of beings capable of and habitually practicing that would be a new biological species, as much advanced beyond ordinary man as one species usually is advanced beyond another.

But fellowship is necessarily a mutual affair. In order to develop this fellowship, and to offer the facilities for the originating of such a higher species, God must afford to men acts of a personal and individual nature. The evolution theory therefore itself demands that such acts be done, for at every upward step the facilities for making that step possible have always been afforded, and it would therefore be "a break in the uniformity of nature" if these things, the necessary facilities for this next most important upward step, were not also afforded.

We have here, therefore, the full justification, from the scientific point of view, of—(1) miracles, (2) the incarnation, and (3) answered prayer. The primary intention and use of each and all of these is precisely to afford to men personal acts by God which they would feel as personal acts of God towards them,

and be enabled thereby to have a feeling of fellowship towards God. All other results from them are secondary. Not the atonement, not the benefits received through prayer or miracles, but the things themselves, were the primary object, as contributing towards fellowship.

The latest investigations of psychology have quite changed the accepted conception of personality and consciousness. It is now a frequently observed and well attested condition for two or more centres of consciousness and memory to develop in the same man, having mutually towards each other all the mental characteristics of two or more persons. This condition is often produced pathologically, and it can also be produced experimentally in the psychological laboratory, for instance by hypnotism. It is therefore demonstrated that there may be, as functions of one and the same spirit, two or more streams of activity, consciousness, memory, will, in every apparent respect the same as though it were two separate individuals acting, perceiving, remembering, and willing, but yet it is all the functioning of one and the same spirit.

When we apply this latest discovery to the traditional teaching as to the trinity and the person of Christ, all the difficulties from the scientific side entirely disappear. Two, three or any number of "persons" existing in the one God, each having towards the others all the experiences of separateness and objectivity, would be entirely in accord with what the latest science has demonstrated the

nature of spirit to be. It would also be possible to suppose the same being, who with infinite power and wisdom is ruling and upholding the universe, at the same time to be going through and feeling all the experiences of a man, with a small, limited consciousness, memory and general capacity.

Love is a state of mind in which a person feels all the pleasure or pain he sees the loved one receive. It constitutes therefore a partial unification of two individuals or souls, in such a way that it might afford the ground whereby there would be no incongruity in one receiving the inflicted pain due for the other's faults.

Just as a father suffers pain on seeing the sin and shame of a loved son, God feels pain on seeing the sin and shame of His loved ones. When God revealed Himself in the small dimensions of a man, for the first time that suffering became apparent so that we could see it.

Just as grief for a wayward son often shortens a parent's life, so it was the burden of pain over those He loved which caused the death of Jesus. The cause of His death was not the pain of the cross, but love, and the pain love feels on seeing the sin and ruin of those loved. That pain, felt all through His life, culminated at the last and crushed out His life, for it was too great for the measure of human strength to bear, though with divine, infinite strength God bears it all the time.

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Ottumwa, Ia.

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PART I
God and Nature

I

NATURE OF THE EVIDENCE

MAN is a religious being. There is no race of civilized men without well-established religion. Various inferences may be drawn from this fact, but whatever the inferences the fact remains a fact. So universal a fact must have a basis in the fundamental constitution of things. This does not mean that religion must come under the domain and survey of physical science. Still taking science in the broad sense of "Classified Knowledge" it does constitute a part of the field of science. And as the universe is one and consistent we may even expect that there will be some bonds of relationship between its facts and the facts of all branches of science.

Religion is commonly considered to include two categories :—Morals, the category of rightness and duty, and worship, the category of relation to a superhuman authority and power. In recent years, especially in the Christian religion, the greater emphasis is coming to be placed upon the former of these, morals and right conduct. While this is true yet it is especially true in the Christian religion, that a deep sense of relation to the authority of the being above us is the most effective motive in producing that right conduct. And not only so, but the wish

of the being above us is believed to exactly and perfectly correspond with the perfect path of right conduct. It would also appear both in a historical study and in a comparison of contemporary religious systems, that in religion as a recognized and systematized institution the latter category,—worship and recognition of the existence and authority of a superior being or beings,—is the more fundamental. There are many religious cults in which ethics and the inculcation of right rules of conduct is given very subordinate place, indeed in some the help of the gods may be invoked in aid of crime as well as of virtue.

If worship and belief in God is so fundamental in religion, the next inquiry is as to the basis of that belief. There may be two lines of inquiry here. First,—Historical, as to the genesis of the belief, and Second,—Logical, as to the present grounds of the belief. The former inquiry is interesting, and its results may have some bearing on the latter inquiry as to the grounds of the belief. But as a practical issue it is the latter inquiry, as to the reasons and grounds for believing in the existence of God, that is the more important, and it is that inquiry that will be taken up here.

The recognized grounds for believing in the existence of God may be divided into two classes, which are generally designated by the terms, "Revelation" and "Reason." These popular terms are not at all exact, but by the former term is intended personal communications from God to men, in the

same sense in which one man communicates his thoughts to another. By the latter term, "Reason," it is intended to include all other lines of proof which man's reason can draw from known facts of the universe.

We will first take up the latter class, the proofs that men believe they can find in the observed and known facts of the universe (aside from revelations) of the existence and character of God.

MEANING OF THE TERM GOD

It is essential to bear in mind from the outset a very important distinction. What do we mean by the word "God" and the existence of God? It would be quite possible on the one hand to so frame our definition of God that it would be practically impossible to find any proof, in this field, of His existence, or on the other hand, to so frame it that in the nature of things the existence of God must be considered self-evident. For instance, a Pantheist might make his definition in this way. "The word 'God' shall be used as a term to designate 'that basis and underlying efficiency which manifests itself in and through the phenomenal, or known universe.'" With such a definition, of course, there would be no possibility of even making a question of God's existence. The phenomena of the universe exist, so necessarily the basis or efficiency which produces those phenomena must exist. The existence of God is implied and necessitated by the very terms of the definition itself. But though in that easy way

we would nominally establish "the existence of God," we would not only know nothing as to God's character but we would not have even the remote suggestion of any connection, not to say identity, between that God and the God of gods that are worshipped in religion and considered to have authority over men's conduct.

On the other hand, going to the other extreme, we may take up the proposition that Moses met with and talked to God on Mount Sinai, and received from Him the "Ten Commandments" written by His hands on two tables of stone, and we may make our definition of the term "God" as the proper name of that person whom Moses there met, just as "Moses" was his own proper name. Then our inquiry would be: "Did or does that person exist?" just as we would make the other inquiry: "Did Moses exist or is the story about him merely imaginary?" With such a definition it is evident that, outside of the province which we have termed "Revelation," it would be impossible to find any proof or even any evidence bearing on the question at all directly.

Very much of the confusion, and very much of the unsatisfactoriness in discussions of this question of the existence of God, arises from this lack of exactness in definition. I take up an argument purporting to be a proof of the existence of God, and it is a valid argument making good its proof of what it starts out to establish. But it does not prove what I have in mind. I have in my mind an exalted idea

of the holy, loving, sympathizing heavenly Father whom I worship, and as I read that argument I say to myself: "It does not prove the existence of this God whom I worship," and so I put it aside as valueless to me. Perhaps this would be true of any or all the arguments and proofs that can be found in this domain of reason or "Natural Religion." And for this reason some people say that the existence of God cannot be proved at all and if accepted it must be accepted as an act of "faith." We must believe it simply because we want to believe it, or because it is our duty to believe it, or something of that kind. But that is to stultify religious faith and to utterly misunderstand the nature of evidence and proof.

On such principles we never could prove the existence of any body that we did not have before our sight, nor indeed identify any body that we did see. Take, for instance, a very extreme case. I have in mind a human person, a being of love, kindness, wisdom, honour, etc., whom I have always called by the name of "My Mother." I look about and see her sitting beside me in the room. But on the principles suggested above I never could be sure that it was really my mother, the person of love, wisdom, honour, etc., which I have always had in mind. All I really see is a face, hands and some clothing. *That* is not a human person, the being of love, wisdom, honour, etc., which I have had in mind, but merely an expanse of material substance reflecting light into my eyes. Yet I positively do

know that that is my mother, the same being that I have had in mind, and that all those attributes of love, wisdom, honour, etc., are really there, though I do not see them, but only see an expanse of material substance. For many and obvious reasons, whenever I see that particular visible form I know that it is my mother's form and that all the invisible spiritual attributes of love, wisdom, honour, etc., are there, even though I cannot see them but only see a material expanse. I see only what the faculty of sight is capable of seeing and thereupon for valid reasons I infer that the other attributes which sight cannot reveal are also present.

That is the correct principle of evidence. If it were a case of hearing I would perceive only what the faculty of hearing is adapted to reveal, namely, a sound, but I would infer the presence of the other spiritual and visual attributes. When I hear the familiar voice I would be foolish to say, because I do not *hear* the familiar *colour* and *shape*, it cannot be my mother. I hear what can be heard and rightly infer that the rest is present also.

Just so in the question before us. By the processes of science and reasoning we perceive or prove the existence of certain attributes inhering in some being and it is no disparagement that those attributes are *only part* of the attributes we would expect to find in the being we have in mind under the name of God,—namely, only the attributes that those processes are suited to perceive or prove.

What we rightly ought to say is this: "By these processes of science and reasoning we have discovered the existence of a being with the following attributes, etc., and those attributes as far as they go are all attributes of the being we have had in mind under the name of God." We have gone a long way towards proving the existence of the being we had in mind, and if the attributes we have discovered and proved are fundamental and important enough we may reasonably say we have sufficiently proved it.

To take another illustration: Suppose a mariner adrift on the great ocean should some night see through a rift in the mist numerous glints of light in the distance, and find floating in the water around him fragments of broken implements and fabrics, he would immediately say, "There is land just ahead, and a city where I can find rescue and safety, and find there men and women, stores and factories, schools, books, homes, love, companionship and everything I need." He would be perfectly justified in saying so, although all that he had actually seen was some utterly useless fragments of wood and some lights. He had seen only some of the things that would exist if a populous civilized city were there,—only a very, very few of them, and yet he was justified in inferring that all the million other much more important things were there also. Somewhat similar to this, perhaps, will be the force of the proof we draw from reason and nature of the existence of such a being as

we have in mind and worship as "Our heavenly Father."

Two cautions are necessary in making use of such reasoning and proofs. First: Could the indications we have seen have been produced by some other agency? For instance: Could the fragments he has seen be débris from some sunken ship, and the lights due to phosphorescence or some sea insect? If any such other explanation were possible then of course he could not be sure there was land and a city near. Still, in the second place, even in that case we would not be compelled to decide that there was not. We must balance the probabilities and decide which was the more probable cause of what we saw. If, however, the case was such that no other explanation but land and a city was possible then the proof would be complete.

METHOD OF PROOF

In seeking to determine, then, what evidence there is in nature of the existence of God the proper method will be to inquire first: Are the material, physical and mechanical agencies and laws insufficient fully to account for all the phenomena that we know of, and must there have been some other extra-physical or extra-mechanical agency concerned? And, in the second place: If so, would the kind of being or agency that would be required to account for it all necessarily or even probably be a being with at least some of the attributes of the being we have in mind under the name of God. If we find

that the material and physical agencies would not have been sufficient, and there would have been required some other agency different from and transcending all the physical and mechanical agencies, that will be the conclusive proof of the existence of some extra-mechanical agency or being. The *existence* of some great being will be then proved, and the next step will be to carefully examine all the signs and evidence, either in the work that must have been done or from other sources, to find out as much as possible about the character and attributes of that great extra-mechanical agency or being whose existence we have demonstrated. Just as the mariner, seeing the lights and the floating substances, knows that there is something different here from what he has before experienced, and he examines these things and studies about them to try to determine what the nature of that "something different" may be, whether it is likely to be the land he longs for, or something else.

Suppose, as we examine those signs and that evidence, we find that it indicates a being entirely different and opposite from the being we have in mind and call God. In that case we must say that we have not found any evidence in nature and reason of the existence of God. We are not warranted in saying this proves that He does not exist, but only that this being we have discovered is not He. He might exist even if there were no evidence of His existence in nature around us, or rather no evidence that we have as yet discovered. Just as land might be really

near though the mariner had as yet seen no indications of it.

Suppose, again, that the characteristics and attributes we find are the same, as far as they go, as those of the being we have in mind. Suppose, for instance, we find that this being must have been a being with infinite power, but find no indications to prove that He had also knowledge, or suppose we find indications of infinite power and infinite knowledge but no indications to prove that He also had justice and love. In this case two or three different conclusions would be possible. We might say: (1) "A being with these attributes exists, but as to the being we have had in mind and called God, there is no evidence whether He does exist or not." Or (2) "This being whose existence we have proved is really God, the same person we have had in mind, only we have been mistaken somewhat as to His character and He is a somewhat different being from what we supposed." Or we might say: (3) "Since this being whose existence we have proved is the same, as far as we have found out about Him as the being we have had in mind and called God, He probably is the same being and has all the attributes we have considered God to have, only we have not yet found here the evidence of the other attributes."

For instance: Suppose it were possible to perfectly account for the existence and the origin of everything we see in the universe by means of the merely mechanical forces and laws of nature alone. In that

case we must say merely that we do not find any evidence in nature of such a God as we have had in mind. He may exist or may not exist, but nature has no evidence to give on the subject. If there is evidence in other fields,—for instance a sufficiently attested revelation,—that is another question, but nature has nothing to say on the question. It simply is not a witness.

Suppose, on the other hand, that it is entirely impossible to account for the existence and origin of things, and for their being now in the condition they are, by means of the known mechanical forces and laws of nature, or by means of any merely mechanical forces and laws that we are able to conceive or imagine. But suppose we could account for all in case there existed a being in the universe with infinite directing power, and further that only a being with infinite directing power could produce such a universe as we see: In that case we have proved the existence of *some* extra-mechanical being, and there would be logically possible any one of the three conclusions described above. That is to say: We would know certainly that a being with infinite directing power must exist but (1) we do not know from this evidence conclusively as to whether the God the Christians worship exists or not, or (2) this being we have proved to exist is really the same being that the Christians worship, only they are mistaken about Him, and He has only infinite directing power and does not have infinite knowledge, justice and love also, or (3) since it is proved that a being

exists which has infinite directing power, it would not be unreasonable to think that that same being also has infinite knowledge, justice and love, and so it is quite possible to believe that it is one and the same person as the God whom Christians worship. Any one of these three conclusions would be perfectly possible logically,—provided there was only evidence of the existence of directing power, and absolutely no evidence, either direct or indirect, of the existence of the other attributes of knowledge, justice and love.

But there is one more preliminary consideration that must be borne in mind. Attributes never are found single, there are always several attributes found combined together, and if one is present the others are always present. For instance, if we find that a certain object has weight we will always find that it has colour also, and that it has temperature, extension and some other attributes, at least that has always been our experience. As far as our experience goes, if a living being has reasoning power it also has memory and will. This association of the same attributes together is a well known and well defined fact in all our observation and study. So much so that certain naturalists have claimed that if they see one tooth or one bone only of any animal they can, from the character of that, tell what all the other characteristics and attributes of the animal were. At one time certain astronomers proved by expert calculations that there was something somewhere in the solar system whose great weight was affecting the orbits

of the planets. They knew absolutely but the one thing about it, namely, that it had *weight*, and had no direct evidence that it had any other attributes at all, but for all that as soon as they proved that it was a body with weight they were just as sure that it also had extension, colour and a number of other attributes, as they were when the great telescope was brought into use and they actually saw for the first time the planet Neptune. In the same way an archæologist finds carved ornaments in a cave that prove that a being has lived there which possessed artistic taste. With only that one fact proved, and no other evidence to base his belief on, he would still have not the slightest doubt that that same being also possessed memory, reasoning powers and a number of other important attributes.

The same therefore will be true of the evidence as to the existence of God. Suppose we find proof that a being exists which possesses, for instance, infinite directive power. In that case, even though there were absolutely no direct evidence as to any other of that being's attributes, that fact alone of his possessing infinite directive power would justify us in also believing that he had the other essential attributes which we have always found in all beings that were endowed with directive power. Of course there are essential attributes that are always found in such beings, and there are accidental or unessential attributes that are only sometimes found in them. As to the second there would be the *possibility* of their existence, and we must seek further proof before we

could be entirely certain, but as to the first we would be sure of their existence.

KINDS OF ARGUMENT AND ORDER OF THEIR USE

In seeking proof of the existence of God by the methods of "Natural Theology" or reason, there are several lines of argument that are often used. For instance there is the "Ætiological Argument," that is the argument based on the necessity of a first cause in the universe; the "Cosmological Argument" or the argument based on the observed orderliness of all things in the universe; the "Teleological Argument" or the argument based on the appearance of design or an object sought after, in the construction of many things; the "Moral Argument" based on men's moral convictions, etc., etc.

In using these arguments or lines of proof it will be very necessary to bear in mind some of the cautions outlined above. A critic might take up any one of these arguments and claim that it was not conclusive, or not satisfactory, that it did not furnish conclusive proof of the existence of a supreme being, or that the being whose existence it proved might not be the same as the being we worship as God. But the real force of these arguments is cumulative, and they must all be taken together to form one complete argument, as they supplement one another.

To get their full force, they should be taken up in the order given above; that is:

1. Ætiological argument,—a first cause.

2. Cosmological argument,—order in the universe.

3. Teleological argument,—design in the universe.

4. Moral argument, and various others.

The ætiological argument should be taken first, because it is the most conclusive. It does not give evidence for so many of the attributes of the supreme being as some of the others do, but its evidence is more compelling and conclusive. It really establishes the existence of some supreme being as the efficient cause of all things, and that once settled, when the other arguments afterwards bring proof of order, design, justice, etc., in the universe, it is quite logical to claim that that proves order, design, justice, etc., to be attributes of this supreme being. If there were no evidence of the existence of a supreme being, then even though we did find indications of order, design, justice, etc., it would not be impossible to demur and say simply, "We don't know where they come from." "We can't explain them." But having once determined that there is some kind of a supreme being that originated all the processes and changes we see, then if among those processes which it originated we see order, design, justice, etc., the proof is logically complete that that supreme being had the power and the disposition to produce order, to adapt means to a worthy end, and the like, because we see precisely those phenomena in the things which it has done. If the first argument conclusively establishes that

some being or agency aside from and above the mechanical forces and laws of nature must have operated to bring about all the phenomena we see, but does not tell us very definitely as to the character and attributes of that being or agency, then these other lines of argument, by examining the work which is thus proved to be the work of that being or agent, can tell from the character of that work something as to the character of the being or agent that produced that work.

II

ÆTIOLOGICAL ARGUMENT—FIRST CAUSE

WHAT IS THIS INTENDED TO PROVE

ALL these various lines of argument have been often presented and are doubtless familiar, so it will not be necessary to go into minute detail with all of them. The first, however, the "Ætiological Argument," is not only the most fundamental and the one that is most widely relied on and which recurs most naturally to most people as the proof of the existence of God, since our most vivid conception of God is as the creator or first cause of all things, but unfortunately it is by most persons almost always somewhat misunderstood and misstated. Moreover the recent advance of science has slightly affected the form and matter of the proof, in this case fortunately making it more definite and absolute than before.

Just what, then, is the "Ætiological Argument,"—the argument from cause and effect,—and just what does it prove? I suppose that most people would say at once that it proves that the creator of all things is God. But that is not correct. As to the universe or sum total of matter and force which

we see and know about, it does not prove that God created it. Indeed it does not prove that it was created at all. It cannot bring valid evidence to prove that it is not eternal and has not existed forever. If I believe beforehand that God created all things then this argument may have some force to confirm and reinforce my belief, but to one that denies that God created all things it cannot bring valid proof to compel him to believe it.

For instance if I say,—Nothing can exist without a cause; therefore all this universe of matter and forces must have had a cause and I will call that cause God; he will very pertinently answer,—If nothing can exist without a cause then this being you call God must have had a cause also and who created God? If I reply that we cannot conceive of an infinite recession of causes each one being caused by one before it to infinity, and therefore our minds compel us to think that there must have been one first cause that was not caused by another cause back of it, and that first cause was God,—he will again reply,—If one thing can exist without a cause another may also. You chose to say that God was that first cause and I chose to say that the universe itself was that first cause and uncaused by anything else behind it. If I still contend that God would be a more suitable being to be a first cause than the universe, he will reply that that is merely a matter of my opinion, and his opinion is that the universe is more suitable, and moreover the universe is a thing that we know exists and it

is more plausible to claim as the first cause a thing that we know exists than a thing that we don't know exists. In this way therefore our argument would not only utterly fail to convince him, but he would think he had disproved the existence of God entirely.

It is just in this way that some scientists claim that science proves that God does not exist, or that science can bring no proof that He does exist, because they mistake what this argument from cause and effect is intended to prove. It will be important therefore to bear carefully in mind what the argument is not intended to prove, lest we be inclined to think it inconclusive and valueless when we find that it does not prove this which it is not adapted to prove.

What is the doctrine of "cause and effect"? We say it is an axiom, a self-evident truth, the nature of our mind is such that we cannot doubt it or conceive the opposite of it. But what is it that is an axiom, and that our minds are unable to doubt? It is not the proposition that everything must have had a cause. That is not a self-evident truth that cannot be doubted. It can be and is doubted. Indeed in this very argument we are supposing that there is something, namely, God, which did not have a cause but always existed. If our minds find it possible to conceive that any one thing can exist without a cause then it is not an axiom that nothing can exist without a cause,

Nor is it the doctrine that "nothing can come into existence, or begin to exist, without a cause." That would be true, and an axiom, I suppose, which our minds would not be able to doubt. We could not conceive of the possibility of anything beginning to exist or coming into existence without a cause. But such a proposition would not help us at all in our argument. It is true we would get rid of the objection that God must have had a cause, for by our hypothesis we may suppose that He is eternal and never began to exist and only things when they begin to exist have a cause. But on the other hand the opponent might equally claim that the matter and force in the universe always existed and never began to exist, and so never had a cause. In fact in all our experience we have never had any experience of any atom of matter "*beginning to exist*," or coming into existence, and science now tells us that the same may also be said of force. Such a doctrine of cause and effect would be valueless, and we could prove nothing by it because there is nothing to which it applies.

Another statement of the doctrine would be:—"Every effect must have had a cause." But this, in the case of every phenomenon to which we seek to apply it, necessitates another question, whether it is an "effect" or not. If we can prove that it is an effect then we know that it must have had a cause. But the definition of an effect is "something that is produced by a cause." The doctrine would then become:—"Everything that is produced

by a cause must have had a cause." This is a mere tautology and has no value at all of any kind. We must have some more concrete and definite definition of just what it is that our minds declare must have had a cause, and which we cannot conceive of existing without a cause.

The true doctrine of cause and effect is that:—"Every *change* must have had a cause." No change can occur without some cause to produce it. Possibly it would be more accurate to say that what our minds affirm as an axiom that it is impossible for us not to believe would be that:—"Every active change must have a cause." That is to say, whether or not our minds could conceive the possibility of a body in motion stopping without anything to cause it to stop, yet we could not conceive the possibility of a body at rest beginning to move without some cause. But since science has demonstrated the law of the conservation of energy, namely, that it takes just as much of a cause to stop a body in motion as to start that motion in the first place, the law of cause and effect is universal, that:—"Every change must have had a cause to produce it."

It is not therefore the sum total of material and energy existing in the universe, whose existence compels us to believe there must have been a cause to produce it, but it is because there are changes going on in the universe and we are compelled to believe that each one of those changes must have had a cause to produce it, and

that is the basis upon which the argument for a first cause is built.

NECESSITY OF SOME EXTRA-PHYSICAL AGENCY'S WORK

But the conclusion is not so easy to reach as it might at first seem. There are millions of changes going on constantly in the universe, but we find that one change always produces another change. If we ask what was the cause of any particular change the answer is that it was some other change that occurred before it. It would be logically possible, therefore, to suppose that these changes just go on producing each other in a circle, A producing B, and B producing C, and C producing D, and so on through a long series, the last change of the series producing the change A again and A producing B, and so on around and around the circle forever without any end or any beginning. This is indeed the theory of some philosophers, and they claim that all things go through vast cycles, and some time, after millions of ages perhaps, they will all come back again to exactly the state in which they are now.

The fatal objection to this theory is that all the observed facts point the other way. There is a progress or tendency in all changes, and the direction of them all is the same way. The longer the process goes on the farther it gets from the condition that produced the first change. There is never any known tendency to reverse the order and pro-

duce a condition higher up the series; each change always produces a condition lower and lower down the series, with never any tendency to ascend. Even if there are some cases that at first seem like ascending it is always found that the ascent is more than balanced by an accompanying descent.

We might illustrate the case typically by saying that it is the tendency of things to fall always down and never up. Though there are cases where a body seems to fall up instead of down, as a balloon in the air or a cork in the water, yet it is only apparent, for a heavier object always falls downward to raise the lighter object upward. Thus for instance there is a tendency for oxygen and carbon to unite and form carbonic acid, and for oxygen and calcium to unite and form lime, and again for the acid and the lime to unite and form carbonate of lime and so the process goes on. Now it is indeed possible to separate any or all of these combinations, reversing the process apparently and returning them to their previous condition, but it can only be done by means of making some other combination harder to dissociate, or by using up an amount of heat or some other energy greater than the amount that was produced in making the original combinations. There has been therefore a net descent, though in certain parts there has been an ascent. The ascent is always more than overbalanced by the descent.

This is the law that holds good of all changes both in the domain of physics and chemistry, indeed of all mechanical changes. There may be changes

where there is an exact balance and neither ascent nor descent, as for instance the change of direction of a planet revolving in a vacuum through the interaction of two forces exactly balancing each other. But that is simply a case where the descent or loss is reduced to zero, but there is no gain or ascent, and there is no known case where there is any net ascent to counterbalance the millions of cases constantly occurring with a constant net result of descent.

To state the case more concretely :—There is in the universe everywhere, so far as we can find out, a constant tendency for heat to radiate away, for bodies or atoms to gravitate closer together, for atoms to coalesce into liquids and solids, to combine into combinations and these into other combinations, always the net result of the reaction being something harder to resolve and return to an uncombined condition. It is true that in one single case, that of radium, most observers have for some reason chosen to conjecturally call the process that spontaneously takes place by the name "Disintegration," but it too, like all of what are called "chemical combinations," is always attended with the giving off of heat or energy and no one conceives that the process, whatever it is, could be reversed without the expenditure of a greater amount of energy than was produced by it. So whatever name is given it, it is no exception to the universal rule that all known changes have only the one direction, that is, into states from which it is always harder and harder to cause a return to the initial condition.

In other words, as it has often been expressed:—
“The universe is like a great clock that is constantly running down.” All its changes are precisely like the motions of a clock whose spring unwinds to cause those motions. The spring is constantly unwinding, and there must come a time, if nothing intervenes, when it will be entirely run down and the motion cease. In the case of a clock it would not be at all difficult to compute from the condition of the spring, just how long the clock will run and just when it will stop. In the same way, if one had perfect knowledge of all the facts in the universe it would be possible to compute just how long it would require for the series of changes that are now going on to run out and the whole universe to be reduced to the condition in which it could spontaneously produce no more changes. It doubtless would be billions of billions of years, and beyond the power of mind to conceive so long a stretch of time, but it is certainly and irresistibly tending towards that condition and that condition must certainly and inevitably be reached some time,—that is, provided there is no other agency beside the mechanical energies and laws to intervene and prevent it, for those mechanical energies and laws by themselves must irresistibly and inevitably lead to that condition. That is the direction in which they are constantly and irresistibly tending and there has never been discovered in them any possibility of any other tendency. A process that thus tends towards an end cannot be an eternal process,

for anything that began an infinite time ago and was capable of being finished must have been finished an infinite while ago.

On the other hand, again, by examining the clock it would be quite possible to compute the exact moment at which it was wound up for its present movements, or at least to prove that it is not longer than a certain given length of time since it was wound up. In the same way, if we knew perfectly all the facts and forces in the universe it would be possible to compute the exact time when all this vast series of progressive changes must have first begun, or at least to prove that it has not continued longer than a given length of time without the influence of other agencies than the mechanical energies and laws of nature,—that is to say, “It has not run longer than a certain given length of time since it was wound up.”

These considerations establish one most fundamental fact. There must have been, at some time, operative in the universe some great agency different from the mechanical energies and laws which we know and whose ways of working have been so fully established. If the universe had always existed with nothing else operative in it but these mechanical energies and laws it would long ago have been run down and have finished its course, for, however immensely long the time required, if it had begun absolutely an infinitely long while ago it would long ago have been finished, no matter how long it extended. We have therefore demonstrated abso-

lutely the certainty that some other agency must at some time have intervened and acted, and indeed theoretically proved the possibility of computing the period of time within which that intervention must have occurred.

Thus far we have been travelling familiar ground, and thus far even the atheistic materialist would cheerfully go with us. Right here, however, we have need to observe the caution made some time ago, first, not to suppose we have proved more than we have, and second, not to think, because we have not proved the existence of such a God as we have in mind and worship, therefore the argument has failed. We have at least established one very fundamental fact. We have made one advance and arrived on solid ground that can be made the unquestioned basis for further explorations. We have not only proved a probability, but we have demonstrated the fact, as far as science is able to demonstrate any fact, that *there must have been operative some time in the universe SOME OTHER AGENCY than any of the mechanical energies and laws that we now know*. This fact is demonstrable and is generally admitted.

NATURE OF THAT EXTRA-PHYSICAL AGENCY

As I have just said, all the great thinkers of modern times, under some form of words or definition, recognize the essential fact stated above, that at some time past, present or continuously, some other agency above and aside from the known

mechanical energies and laws must have exercised a supreme influence upon the phenomena of the universe. Herbert Spencer chooses to call it "The Great Unknown," and some similar phraseology is usually employed by most of the agnostic or materialistic school of thinkers. Here again I would call attention to the observation made some time ago (page 26) that if our argument should demonstrate the existence of a being with some of the attributes we usually associate with God but give no indication at all of the possession of other attributes that we consider God to possess there would be logically possible any of three conclusions:—(1) That a being with those attributes exists but as to God there is no evidence whether He does or does not exist. (2) Such a being exists and is really God, and we have been mistaken in our idea of God, or (3) That being is really God and has all the other attributes we usually ascribe to Him, only it remains for other processes to reveal the other attributes to us.

Of these three alternatives the agnostic school of thinkers choose the first. "There is no evidence here," they say, "that such a being as the Christian worships as God exists. Some being other than the laws and energies of nature exists and has at some time exerted a controlling influence over things, but the attributes are so uncertain and undefined that we are justified in naming it 'The Great Unknown.'"

But they overlook the fact that other lines of argument may determine some of the other attributes of

this being here proved to exist and may show that they are precisely the attributes of the God who is worshipped. Nay more, we have not yet exhausted the possibilities of this same argument from cause and effect, and it may be that even by it we may be able to find out some of the attributes of this extra-mechanical agency,—the attributes which would be necessary to enable it to do what our investigations demonstrate must have been done by it,—attributes too that will go far to identify it with the supreme being that Christians believe in and worship as God.

Let us, then, examine more closely the situation. Let us examine more definitely just what must have been done by this extra-mechanical agency, in order that the universe under its known mechanical energies and laws would be able to *begin* a course that should attain at the present point of time precisely the position and condition in its great progress that we see at the present time. Let us see if we can formulate or conceive any agency that would be able to do what would be sufficient to *bring about just this state at this time*.

Suppose that we should be able to conceive or formulate some plausible process or act that would be competent to satisfy all the conditions. We may suppose all the present material and energy, and all the natural laws to have been previously in existence, but we should be able to conceive some reason why, though existent before, they did not previously begin the process, and why just at a certain par-

ticular time they did begin the process which we know has been going on for a limited length of time and has brought all things to this stage at this time. And suppose we should be able to conceive or formulate the nature of some agency or being such as would constitute it able to perform the necessary acts to inhibit for a time, or to bring about the starting of this great process. In other words, it is demonstrable that something has some time been done that the known mechanical energies and laws would not be able to do. Suppose we should be able to conceive a plausible way in which it could be done, and the kind of a being or agency that could do it. That would not, indeed, constitute a proof that such an agency actually did those acts, but it would constitute a plausible hypothesis worthy of consideration, and create some degree of probability that it was all done in that way. This probability would be greater in proportion to the inherent probability of an agency of that nature existing.

Suppose then in addition we are able to show that there is actually in existence and known an agency with a nature and powers exactly suited to do the very kind of "something" that we have seen would be necessary to inhibit or to start the universe process. Suppose we know and see such an agency doing now in some limited degree, or on a smaller scale, precisely the same kind of an act as our hypothesis above calls for. That would raise our hypothesis up to the rank of a proved fact, for it would constitute the same grade of proof as is ordinarily accepted as

establishing a scientific fact. And the proof would be the more compelling if there were no other known agency in the universe competent to satisfy the conditions, or indeed it were difficult to even conceive or formulate clearly any other satisfactory solution. We might then reasonably say we had fully proved that the universe process was started in that way, and that there exists an agency of that character great enough to start it in that way. In other words, we could say that we had demonstrated something as to the *character* of that other or "extra-mechanical" agency which all scientific thought now admits must have some time been operative in the universe. We would have found out something about the nature of what we are pleased to call the "First Cause." I believe that we will find that such an agency does exist, is well known and does just the kind of act that is called for here. And really it is about the only active extra-mechanical agency of any kind that we do know of in the universe.

Let us revert again to the illustration of the clock. Suppose that I should find by examining the main-spring that it would take it just say fifteen hours to run down to its present condition after being fully wound up. Now that does not, indeed, necessarily prove that it is just fifteen hours since that clock was wound up. It may have been only partially wound up, only one or two hours ago. It may have been wound up twenty hours ago and stopped for five hours and been started again. Or it may possibly

have been wound up a long while ago and set away for a year or ten years or fifty years. I can tell nothing at all about the time when it was wound up, but I can tell that some time within the past fifteen hours some agency outside of the energies within itself has been at work upon it and has either given it its power by winding it up and then started it, or by some way releasing and starting into action the powers already in it has *begun the series of progress* that has brought its wheels and hands to the present condition at just the present time.

Now just precisely that is what we must say has taken place in this great clock, the universe. We have, by hypothesis, determined the limits of the length of time it could have run before coming to the stage in which it is now. Be it a billion billion years or still a billion billion times as many more is immaterial. It could not have been infinite, as is demonstrable, and the argument is the same whether it is one year or the longest period conceivable. Within a certain definite period of past time some agency has started the wheels of its progress into action. It may have at the same time created all the energy that carried on that progress or it may not. That is immaterial. It may have all been present but held inactive for an indefinite or even infinite period before, but at that particular time that agency started those energies in the progressive series of acts and changes that have gone on and produced the results which we see. That is all we can certainly say. More may be true, but that much

certainly must be true. That is the one thing that is demonstrated to have taken place whether more has or not.

A KNOWN AGENT WHICH PRODUCES THAT KIND OF RESULTS

Now is there any known agency in the universe that is known to be able and suited to do that, or to do things of that essential nature? There is such an agency, common and very well known. Let us examine just what is the exact character of the actions and functions of one of the best known of agencies, the agency that in popular language is called the "human will" and which might perhaps in exact scientific terms be properly defined as "The method of action of the life, mind or spirit upon mechanical energies." Just what is the nature of that action? What does it do? and how does it do it? We may answer in a word:—What it does is *to control and direct the activity of mechanical energies.*

Among all the interesting fields of scientific research in the past half a century, not the least in interest or in the importance of the results achieved has been the field of psychological research. During the earlier part of that period the investigations were carried on chiefly along physical and material lines under the name of physiological psychology. And it seemed to be the aim or the hope of many of the investigators to be able to disprove the existence entirely of what is commonly conceived of as the soul or non-material mind, and explain all

phenomena as merely functions of matter and material energy. That attempt, if attempt there was, never was successful. In later years, however, a large and increasing school of investigators have turned their attention precisely in the other direction, towards investigating a range of facts that are very evidently outside the range of physical causation, and though the work is yet far from completed, and results in many cases far from being definitely and finally established, yet enough has already been accomplished to put the belief in the soul or mind as a definite, non-material entity on a firm scientific basis. There is now a quite wide recognition among scientific men, that the soul or agent that manifests itself by life, thought, will, etc., in living organisms, whatever its character, origin or future destiny, is a real existent, non-material agent, different from any of the mechanical energies, and is an object to be studied as a fundamental controlling and directing factor in the actions of living organisms. (See Appendix A.)

There was a time when men were disposed at this point to make a short cut to their conclusion, and even yet some are disposed to think there is a measure of validity in that road. They would say:—"By my will I exert energy. My will or soul therefore is capable of creating energy, therefore it is plausible to suppose that all the energy in the universe was originally the product of some will, namely the infinite will of the infinite Spirit, God."

The objection to this is that science denies that

the will or soul produces the energy that it seems to exert. It is proved that all the energy that is exerted in any action of the body was already present in the muscles of the body just as the energy that moves the engine was already present in the coal and steam in it. The will or soul does not create the energy it seems to exert any more than the engineer creates the energy his engine exerts.

But while that answer is true yet it does not fully cover the case. The will or act of the soul does not create that energy, but it does do something. It in some way brings it about that a certain act takes place just at a certain time. Whatever it is that the soul does, if it had not done it that act would not have taken place at that time. It was entirely because it did that something, that that act took place just at that time and not at some previous time or at some later time. That same soul, if it had chosen, could just as easily have caused that that act should have taken place at an earlier time or at a later time. It would, perhaps, have been the same energies that produced it, whenever it was produced, earlier or later or at that time, but the soul, by some act that it performed, brought about that it did not take place at the earlier date when it was perfectly possible according to the mechanical energies for it to take place, and that it did not wait till the later date at which those same mechanical energies would have been just as competent to produce it, but that it should occur just at a certain definite time fixed by itself and not determined by

the tendencies of the mechanical energies that produced it.

As to just what the soul does to cause the act to occur at that time and not at another time, we cannot yet clearly say, but of the fact there can be no question. Let us examine some simple act, as the throwing of a stone. The stone is in the hand and will be thrown as soon as the hand makes a certain motion. In the arm are certain muscles. If those muscles contract in a certain way it will move the hand in the way necessary to throw the stone. There are certain elements stored up in the cells of those muscles which by coming together would cause those muscles to contract. There are certain nerves connecting with those cells in such a way that a certain kind of activity in those nerves will cause those elements in those cells to come together and contract the muscle. Those nerves are in connection through long nerve cords with certain centres in the brain. Whenever a certain kind of activity takes place in a certain cell or cells in that brain centre there is a kind of activity in the nerve cord which produces just precisely the right kind of activity in the nerve ends at the muscle cells to make the elements in them unite and cause the muscle to contract.

Now all these, as far as we know, are purely mechanical energies, just as truly as that of the steam in the engine boiler, and they do just what their nature compels them to do in just the way their nature compels them to do it, and they could not do other-

wise or could not help doing what they did, the conditions being what they were. And each act of one energy made the conditions right for the next energy farther down the line to do what it did. At the head of the series, therefore, there must have been some energy that was capable of performing its activity when the conditions were right, and the conditions were made right only when the soul did what it did, —whatever it was we cannot yet say. In other words that energy was in all ways capable of performing its activity, but the soul, by some means, brought it about that it actually performed it at this instant and not at some other instant, though intrinsically it was just as ready to perform its activity at that instant as at this. The soul therefore determined at what instant it should perform its activity. That is practically equivalent to saying that the soul had the power to prevent its performing the activity which it was the essence of its nature to perform, during a certain interval of time, and to only perform it at the special time it selected. For we are supposing that the act itself was the act of that energy and not of the soul, and if it was the act of that energy, which it was its essential nature to perform, it must perform it unless there is something to restrain it. That it did not perform it during all that interval must have been because it was restrained from performing it. And that it was the soul that was restraining it is proved by the fact that the only change that took place and by means of which it was enabled to perform its essential activity was something

that that soul did. For by hypothesis this is the very first activity in the chain of activities. The only alternatives are that the soul created or caused to act an amount of energy that became the first member of the series,—which would suit our argument equally well,—or that the whole event and the time of its occurrence were mechanically determined and the soul had no determinative influence over it at all. This last supposition would destroy all possibility of volition or real acts of the will at all. I would have no moral responsibility for my acts at all, for I could not prevent them or influence them in the slightest degree any more than I could the wind blowing or the stars revolving in their orbits. I as a willing, responsible being could have no possible control or influence upon the course of my life or conduct or that of any other persons. And if that were true what would be the use of arguing this or any other question? Happily that philosophy has now few advocates.

What have we found, then, to be one of the proved facts of science? We have found that in our living bodies there exists a non-material agency of some kind,—which, as far as we can find out, is identical with the agency that thinks, feels and remembers, and which is popularly called soul, or mind. We have found that this agency has power to so control or affect mechanical energies that they perform the essential act which it is their nature to perform only at the time when this agency or soul selects for them to perform it and releases them to perform it.

That is the fundamental fact, and it is a fact of enormous significance. It is a new something done in the world, which the mechanical energies are entirely unable to do. It makes no difference how infinitesimally small in each case that act may be. It makes no difference how small a quantity of energy is thus caused to act or held in check and released at the desired moment. The quantity concerned is not a matter of any significance at all in this argument. It is the quality of the act that is significant. Quantity is entirely a relative matter in any case. If an agency of the size that exists in my body could thus control one unit of energy an agency twice as large could control twice as much, an agency a million times as large could control a million times as much, and an agency of the same kind sufficiently large could in the same way control all the energy in existence in the universe. *This is just the act that must have been done to account for the beginning of all the great universe process.*

VALIDITY OF THIS CONCLUSION

It is quite possible that to the untrained mind this truth may not at first be entirely compelling. The train of causation seems to be traced back to some infinitesimal activity in a microscopic brain cell, and it seems a great leap to reason from such a small activity to one so great as to extend through the millions of miles of the great universe. But really that is precisely what science does in many other fields of research, and considers the results thus obtained as

perfectly demonstrated. For instance, in demonstrating the great law of gravitation to extend to the millions of immense suns over the billions of billions of miles of the whole universe the calculations and experiments were made with objects of only a few ounces' weight, falling only a few inches or few feet of distance, yet the deductions could be perfectly made from one to the other. In work with the spectroscope there is used perhaps a little speck of flame but a small fraction of an inch in size, but yet from this infinitesimal experiment absolute deductions can be made as to the vast disc of the sun, a million miles in diameter or the character of vast nebulae a million times greater still. Indeed the largest instance of either a falling body or of a flame that we have ever seen on this earth, would be comparatively infinitesimal in comparison with these vast conclusions which science deduces. It is entirely the *quality* of the action or phenomenon that has any importance in such an inquiry. The quantity present in any given instance is of no significance in such an inquiry.

Notice, then, what it is that we have demonstrated. We have shown above that in the great clock of the universe the activities and changes that are going on are a progressive series, and a series that must have taken its start at some definite time within a certain definite past period. The changes and activities themselves are all produced by various mechanical energies working according to their established laws, but the fact that that series of

activities began to operate just at that time and not before or after, but just at the time to bring them just to their present stage of advancement at this time, is the real question to be solved. It is the question of energies which are able to produce certain results, and by the essential laws of their nature tending to produce those results, yet only beginning to produce those results at a certain specific time. That is the phenomenon we have to account for on a large scale in the great universe. But as we have seen, just that phenomenon, on a small scale, is brought about in our living body, every time we begin an act. A non-material agency in our bodies which as far as we can find out is identical with the agency which thinks, feels and remembers, has precisely the ability to produce that phenomenon.

In other words, we have found in addition to the *mechanical energies* existent in the universe, another agency or being also existent in the universe of such a nature that an agency of that nature acting upon or in conjunction with the mechanical energies would be able to produce precisely the result which we see has been produced, namely, bring the universe into precisely the state in which we find it at the present moment. Whatever that agency within us is which has power to control energies and start trains of activity, and which we call soul or spirit, just such an agency, if large enough, would have been able to control all existing energy, and start the train of activity in just the way

and at just the time to bring all things to their present state at just the present time. That is precisely one of the characteristic attributes of that species of entity. And moreover this alone of all the agencies known to exist would be able to accomplish that result. There is no other agency known to exist which is suited to and capable of doing it.

Now according to the canons of scientific reasoning this proves that this was the agency which produced that result. It proves it just in the same way and therefore with the same certainty as all the other great scientific facts are proved. Where an effect is produced and we know of a cause or agency capable of producing that effect, and aside from that one given agency there is no other known agency that would be able to produce that effect the conclusion is compelling that the given effect was actually produced by that agency. We know no other way of making inductions in science, and that is the common way in which our inductions are made and our beliefs formed.

Moreover in all cases where we see an effect produced that is distant in time or place so that we cannot examine and see if a given agency was actually present, yet if such an agency is known to have been really existent at any time, in any place, and in any quantity, provided an agency of that nature would be able to produce such an effect, and there is no other agency known to have ever existed that would be able to do it, that is also always counted as full demonstration that that was the kind of agency

that produced it,—that it was produced by an agency of that character.

For instance, because animals to-day produce bones of the same shape as the fossils found embedded in the rocks, and there is no other known agency that would be plausibly capable of producing just those things, therefore we conclude unquestionably that those fossils were produced by animals, even though it is evident that they have been in their present state and position for a million years, and we have no other direct way of knowing that there were animals in existence at that time. Because the superheated gas which forms the flame in our lamp or stove produces light and heat, and we see the same things, light and heat, emanating from the surface of the sun, we irresistibly conclude that there is superheated gas or other substance there also, especially if we know of no other agency that would be able to produce that result. And if with the utmost powers of our telescopes we discover that light is emanating from some point in space millions of millions of miles away, we still make the same confident induction, that there is superheated gas or other substance there. If it comes from a nebula extending over a vast region a million times larger than our whole solar system we still as confidently conclude that it is caused by superheated gas.

STARTING THE UNIVERSE PROCESS

There is one more possible objection that might perhaps be urged at this point, and which it will be

necessary to consider in order that the proof may be seen to be complete. It may be objected that we do not know that this which it is shown that an agency of the character of our spirits is capable of doing was actually done at any time. That hypothesis proposes simply the starting of energies already in existence to doing the acts that they had an intrinsic tendency to do, or perhaps restraining them from doing it till the chosen time. Something certainly was done at some given time within the period which we have ascertained is the longest period the great clock of the universe could have been running, but suppose that something which was done was to create all the energies active and operating from the start. Suppose what was done was to wind up the clock, not merely to start a clock already wound up. Or even suppose it was to make the whole clock, spring and all, already wound up and going. In other words, we might suppose (and most of us do suppose) that the universe was created with all its energies in full operation, and they went right on operating according to their essential intrinsic tendency, from the moment of their original creation. In that case where would be the proof of the activity of an agency similar to the human soul?

In answer to this we must admit, of course, in the first place, that we cannot say that the act which began this universe process was not one of actual creation, and therefore greatly transcending anything that could be done by an agency merely like the human soul. Both logically and theologically, in-

deed, we would be quite disposed to believe that it was. But that does not invalidate our argument, though perhaps it renders it a little less obviously conclusive than it would be if we could prove that both matter and energy were preëxistent. As suggested in Appendix A our task would be very much easier if we were warranted in accepting the conception as to the basis of things that is rather dogmatically asserted by Professor Haeckel and that school of monists.

But to those who believe that all matter and energy were first created at the instant the great universe process began, it is hardly necessary to use this argument, or any other. If all things were then first created there must have been a creator. And a being great enough to create all things certainly would be great enough to be worthy of worship, and certainly could not have been lacking in any of the powers possessed by any of the creatures that resulted from his creation. An agency that could create energy certainly must be one able to control, stop or start its activity as we have proposed above.

It is only on the theory that both matter and energy preëxisted before that time that it is necessary to seek further proof of the existence of a being like God. And since that is the theory so many physical scientists feel compelled to at least provisionally favour, they are thereby compelled to seek an explanation how a process and activity could begin at a given time which had not begun during all the previous time that matter and energy had been in

existence, especially that process being the one and only series of activities that they were by nature able to go through, and a series of activities that they must have always from their beginning have had an equal tendency to begin and go through.

We are bound to apply this solution to the problem if possible. Science is bound, in attacking any problem, to first apply to it every *known agency* that is adapted to contribute to a solution. All that known agencies are capable of effecting it is bound to accept as effected by them. Thus, to take one instance, in the problem of living activities, the materialistic scientist is perfectly correct in claiming that we must believe every change, reaction or transformation going on in the living body is purely the work of physical energy, because it is the nature of physical energy to produce that class of results, even though the great majority of these specific results have not yet been produced experimentally in our laboratories. Thus the bunglesome but tenaciously held theory that certain activities in the tissues and organs are the working of a different something called "vital energy" or life force, has to be given up:—though that does not preclude the presence of a directive and controlling agent transcending and acting upon those physical energies which do the work.

In the same way we must apply to the great universe problem all the kinds of agencies known in the universe. We must carry the process back as far as all possible working of those kinds of agencies would be able to be made applicable. Even though there

may be something more beyond and transcending all of them, yet that much we may legitimately do, and indeed must do. We must carry the process back, not only to the point which must have been the initial starting-point for the process of physical changes, but we must, since we can, carry the process still back of that point to a point when all these physical energies, ready to be started but not yet started on this great progress, were held in control by a great agency, which, as we have seen, must have been the same kind of an agency which does the same kind of an act in the small sphere of man's activity.

For even if all this energy was created at that time, we must notice that though its creation may not have been antecedent to its beginning to act by any appreciable interval of time, yet *logically it is antecedent and distinct*. This is especially evident if energy is, as now generally acknowledged, a permanently existing entity. Moreover we know, from the phenomena of voluntary acts, that it is an entity whose very fundamental nature it is to be capable of being controlled or determined for or against acting at a given time by the kind of agent called life or soul.

WHAT WE HAVE ESTABLISHED

To recapitulate then and to state the case more concretely: As we examine the universe with its myriad interacting energies, and its constant forward progress, we find that it has taken a certain

number of years to go through a certain extent of that progress. For instance let us suppose that a hundred million years ago this earth was still very hot, and there was little of the present order of things we see now upon it. But the energies and processes were in operation that would eventually produce all the things we have in the world now, and it would take just one hundred million years for those energies and processes to so far develop this world as to bring it to the exact condition in which it is to-day.

Go back a million million years, and we will suppose that at that time the sun was immensely hotter than it is now, and this earth had not yet been thrown out from the body of the sun. But the energies and processes were already in operation which would eventually throw out this earth, from the sun, start it revolving on its course, cool it down and fit it with all the conditions necessary for animal life, and moreover it would take just one million million years,—we are assuming,—for those energies and processes to so far develop things as to bring them into precisely the condition that exists to-day.

Go back still farther—ten thousand million million years—and we find a still more primitive condition, but it is still assumed that the energies and processes are all already in operation which will go steadily on in the way their nature compels them to act and eventually bring about the condition of the universe which we have to-day, and the nature of

those energies and processes is such that it must take just ten thousand million million years to develop the universe from the state in which it was then to the exact state in which it is to-day.

But, as we have already shown, this line of progress cannot have been going on an infinite length of time. Doubtless it is a very long time, but it is demonstrable that it is but a finite length of time. Suppose we assume for the sake of the argument that it is a billion billion billion years. That is the length of time it must take for all the energies and processes in the universe to develop this universe from its most primitive possible condition to the exact condition in which it is to-day. (Notice that we have before shown that there is a constant progress, and not a cycle, so there must have been some most primitive possible condition.) What we know, then, is that through all that billion billion billion years these energies and processes have all been steadily acting in the way it is their nature to act. But before the beginning of that period they were not so acting, for had they been acting earlier they would have brought the universe to its present condition earlier than now, for according to their nature they must develop the universe from its most primitive possible condition to its present state in precisely that length of time.

Why did not this process begin earlier? Why did not these energies and processes begin to act before that time? It is precisely the same question

we have to ask about the energies in the brain cell and the processes that accompany their action. If those energies in the brain cell, nerves and muscle had begun to act a minute or an hour earlier the stone would have been thrown just that much earlier. They were all present and ready before. Why did they not begin before? Just so if all these universe energies and processes had begun to act a million years earlier the universe would have come to its present state a million years ago instead of now. In both cases it was mechanical energies and processes that produced all the results, both in the immense universe and in the small human nerves and muscles. But the question is: Why did they begin to act just at that time, and not before or after that time? In one case we know that it was because an agency commonly called spirit or soul had, some way, such power to control and direct them that it could determine the time when they should act.

The inference is perfectly fair and legitimate that in the other case also where an act of the same nature only on an immensely larger scale was done, it was an agency of the same kind that did it. It was an agency of the same kind as our soul or spirit, only on an immensely larger scale, which determined all these universe energies and processes to begin just at that time when they did begin. No other known agency can do things of that nature, and this kind of an agency is doing things of exactly that same nature all the time, so the infer-

ence seems conclusive that it was an agency of that character which did it.

ALL SCIENTIFIC CERTAINTY ONLY RELATIVE

If some should still hesitate to accept this proof and claim that the case was not fully demonstrated, while this theory would account for the beginning of the process, yet possibly there might be some other different agency that we do not know of that would also be able to account for it, so the case is not proved, we must remind such that all scientific proof is only relative, and we have not absolute demonstration for any single fact of scientific knowledge. There is no known phenomenon but it is possible to conceive that it might be produced by some kind of unknown agency in some way differently from the way we feel positively sure it is produced. It would not be impossible to conceive of some other accounting for the fossil bones in the rock strata other than the accepted one,—very improbable but not impossible. It is not impossible to conceive that gravitation may not extend to the heavenly bodies after all, but their motions may be governed by some other agency yet entirely unknown. It is not impossible to conceive that all sight and perception, all the external world is merely a subjective delusion of the mind ; indeed some men imagine that they can conceive that even the thinking ego itself is a delusion and does not exist.

But we do accept all these facts as finally settled merely because their proof is of a certain kind or

up to a certain standard. For instance, suppose an analytical chemist is given a certain compound to determine its constituents. He suspects the presence of some element there though he is unable to isolate it. But in his manipulation some reaction or appearance is observed which he knows that element is able to produce and which there is no other agent known to science that has ever been known to produce. He would decide at once that that element was present in the compound, and no one would ever think of questioning the correctness of his decision. Of course there might be some other kind of element hitherto entirely unknown that was also able to produce that same phenomenon and did produce it there. That alternative is not impossible. But for all that his decision would be universally accepted and the proof declared sufficient.

Take another case. A doctor is called to diagnose a case of sickness. There are certain pains, weakness and other disorders. What is the cause? He knows that a disease with exactly those symptoms is prevalent there. He examines a drop of the blood or some other secretion and finds there the microbe of that disease whose symptoms are precisely what have been noted in the case. He would not have the slightest hesitancy in deciding that the person was suffering from that disease, produced by that cause.

Here, then, are two canons of sufficient certainty that are universally accepted. If a result is observed which a certain agent would be able to produce and

there is no other known agent that would be able to produce it, and second, if we know of the existence and probable presence of an agent whose specific nature is to produce that given result. The proof we have for our decision corresponds exactly to the first and approximately to the second of these canons. In the first place no other known agent in the universe is able to control and direct the coming into activity of physical energy; but just one kind of agent, which we see in the human soul, is so able. In the second place, when the problem of accounting for the beginning of the universe progress is presented to us we find existent in the universe one kind of agent whose activity would be suited to furnish a complete solution. And, moreover, from the teleological and other forms of argument there is much collateral evidence of the presence and activity of such an agent in the very case in question. We are warranted, therefore, in claiming that this proof is quite up to the standard which is accepted for all scientific certainty.

We have therefore accomplished the second step in this argument from cause and effect. We have demonstrated, first, that some great agency other than the known mechanical energies and laws must have operated, at some definite time in the past, to start the great series of progressive changes that is now going on, and second, that that agency which did this was an agency of the same character as the soul which is present in our bodies and initiates series of progressive activities there. We have dem-

onstrated the existence of some great being, and we have demonstrated something as to the character of that being. This is perhaps as far as this argument from cause and effect can go.

FURTHER INFERENCES

But notice two things. First it opens the way for the other arguments to demonstrate what are some of his other attributes in a way that could not be so conclusively done if we had not thus first proved the existence of this great being whose agency brought all things in nature about, and whose character can therefore be legitimately inferred from the character of the results he has produced in nature.

In the second place notice what an exceedingly long way we have already been brought by this argument alone towards determining the character and attributes of that being, or agency. We have identified it, defined it at least on one side, and have found, so to speak, other individuals of the same species or the same family or genus, that we can fully and conveniently study. As we have remarked, attributes are not found single but certain combinations of attributes are ordinarily found associated together, so that if we find that one of these attributes was present in any certain individual we are practically certain that the other attributes always found associated with it in all other known instances were associated with it and present in that case also.

Now it is true that we do not know just exactly how, in our bodies, those trains of activity that we

call "voluntary motions" are caused. What we do know is, first, that they are caused ; second, that they are caused in conformity with certain processes which we call thought and desire. And in the third place we may add that there is a whole range of extra-mechanical phenomena discovered in connection with the activities of our lives, which are all so associated, connected and unified that we feel irresistibly compelled to consider the agency that produces all of them as so unified as to be properly considered one agent or one individual, and to identify it with that agency that emerges to consciousness in our perceptions and thoughts, and which we in popular language call our mind or soul.

If, therefore, we have found in this great being of whom we have been speaking (and whom, for convenience hereafter we may call the "First Cause") any one of the attributes that are the distinctive and the essential attributes of this agency in ourselves which we call mind, etc., there would be very legitimate reason for claiming that all the other essential attributes were present also, and that this great "First Cause" had all the powers, faculties, and essential attributes that we, living men, have. In spite of the stigma which at one time certain persons were disposed to place upon the term "anthropomorphism," it is a fact that the highest kind of existence we have any experience or direct knowledge of anywhere in the universe is that which is found in the person of a man. Multiply that personality with all its powers and attributes to the dimensions of infinity,

and we have the highest conception of a being that it is possible for us to make. At any rate if we take all that is highest and best in ourselves, and think of a being possessing all that in an infinite degree, we are thinking of a being so nearly identical with the character of the being which the Christians worship as God that there need be no question between them.

By this one single argument, therefore, the argument from "cause and effect," we have demonstrated the existence of an extra-mechanical being whom we may call the "First Cause," and we have shown that it certainly has some of the most important and fundamental of the powers of man's spirit, and therefore probably has them all,—that it has all that would be in a man of infinite proportions, and therefore probably has all that is comprised in the Christian conception of God.

ULTIMATE FIRST CAUSE

While we use the term "First Cause" here, it is merely for convenience, and because that is a term commonly used in this connection. It must be fully admitted that we have not demonstrated that this agency is really in the absolute meaning of the term a first cause,—absolutely eternal,—from the beginning,—and the cause of all things. We have proved nothing whatever with regard to that. Science can give no evidence whatever on that question.

Indeed we can go no further back than the moment immediately before the point of time at which

all this universe process started. We can only declare that at that moment this great extra-physical agent existed, and started the process, and that it possessed the attributes and nature that we have seen. We have found no more proof that it is eternal than that matter and force are eternal. Or again, nothing to prove that there may not have been some still earlier agent that was the source of all three.

But the significant fact is that we have proved the existence at that time of this agent, that is to say, of an agent similar to the human spirit, though immensely greater. In other words science has demonstrated the existence of a being as great and virtually of the same nature as the God the Bible teaches, and that is enough for all practical purposes. As to the abstract philosophical question of the absolute beginning of all things, or whether there may not be some other still more primary "First Cause" that was the producing cause of not only matter and force but also of this great spiritual being that has informed and controlled it all; some being so much greater than our highest conception of the enormous powers of the supreme being that all those powers would be as nothing to the infinite greatness and diversity of his attributes, science has nothing to say; and we may add that religion has no need for an answer.

We may say, however, with regard to this great extra-physical agent which we have demonstrated similar to man's spirit, that we can conceive no intrinsic

reason why it might not have existed from the very beginning, and if it has not, some other agent with all those attributes has, for it could not have been produced by a cause less than itself, and we could equally well identify that agent with the Christian's God. As to that agent also we could, as outlined below, argue perfection in all these attributes from its infinite age, so that argument would be just as valid whether this demonstrated extra-mechanical agent or a still previous one were the eternally existing first cause.

Moreover, of all the known agents in the universe mind is the only one which is not by its nature compelled to exert its activity at a determined time, and is freely able to defer and determine the time of its activities. Mind therefore is the one single known agency not conditioned by time, and so capable of being conceived as an eternally existing agency, capable of existing from eternity and yet of determining the activities of other agencies to begin at a given point of time.

THE FIRST CAUSE A FULLY DEVELOPED INTELLIGENCE

There is one more deduction, or one more step in the argument, which has already been more or less anticipated. There is a theory as to the existence of God, or as to the extra-mechanical control of the universe activities, which recognizes that there is a great being or agency analogous to what we call spirit or which we recognize as the basis of life

phenomena in living organisms, and which recognizes that this great spiritual agency is present and active as a controlling factor in the universe on a large scale, but the conception is that it is working blindly, that it is only an unconscious tendency, that is to say, if we make the comparison with known living beings, it corresponds to the life force present in plants or something lower still, rather than to the free, self-conscious spirit or mind of man. Their idea is that this spirit also is developing or progressing just the same as all other activities, and that it is the most developed and highest sample of it which we see individualized and focalized as the thinking, conscious minds of individual men.

There is indeed something fascinating about this theory, and it derives a degree of plausibility from the fact that life as we know it historically has been constantly progressing, and has attained to its highest known development in the mind of man. At first thought it does seem plausible to conclude that since in all the finite specimens we know there is this development and constant rising to a higher status, so also in the infinite life entity or spirit which we posit as the great "First Cause" which started and governs all the universe progress there will also be this same development, and it is a legitimate question to inquire to what stage it has now attained, or to suppose, as this theory does, that in the main, as a whole, it is yet in a comparatively low, unconscious stage, and has only risen to the stage of thought and consciousness in the animals and man.

But a little thought will show that such a being would not at all fit the conditions we have found in the universe problem and from which we have inferred the existence of a universal dominating spirit. That conception entirely mistakes the reasoning by which we prove the existence of this "First Cause," and prove his spiritual character. Since all these known living beings, or this phenomenon of life or spirit present in the universe, is seen to be progressing with a constant tendency, it too must have had a beginning, and cannot at all be considered to have been the "First Cause" that accounts for the starting of the universe process. Indeed, as far as we can find out, the presence of these phenomena of life is an exceedingly recent thing in the universe. Not only does their beginning call for a cause, but the great universe process had been going on millions of æons before they appeared at all. They could not possibly be that "First Cause."

Their only office in this argument is to show that the thing necessary to start the universe process as it must have been started was a possible thing, since they exhibit an act of essentially the same kind, only on a smaller scale. By inference, therefore, they thus show what the character of the first cause was. We do not infer the existence of a spiritual first cause from the wide prevalence of spirit or life activity in the universe, but we prove the necessity of such a first cause for a universe of revolving fire balls that never had the phenomenon of life at all. The only office of our present life phenomena is to

furnish us with *a sample* with which to recognize and picture the character of that first cause and make its existence seem more probable. A single instance of a living man would have been just as sufficient for all purposes of our argument as all the vast extent of life we actually see.

In the next place we may answer to such a theory that it is impossible to think of the first cause as anything else than perfect and at its highest possible development. Some being with attributes corresponding to life or spirit was present at the starting of the universe process, controlling all matter and energies. Necessarily therefore a being (either this one or a superior one having the potentiality of all those attributes) must have been eternally existent, through an infinite length of time. Any process of development, however slow, in an infinite duration of time must have reached the highest stage of which it was capable. We cannot conceive that a great universe spirit, that could make in a few million years the vast development from the capacities of an amœba to those of a man, could have lived through an infinite interval before without attaining higher than the amœba stage. Whatever the being that was the first cause was, we must believe that it was as perfect and as highly developed at that time when it started the universe process as it would be possible for it ever to become.

III

COSMOLOGICAL ARGUMENT

AS already pointed out, the force of the various lines of argument for the existence of God is cumulative, and the force is more apparent when the argument from cause and effect is taken first and the others later. By that argument, as we have seen, we establish the existence of a great extra-mechanical agency which started all the great universe process, and also prove something as to its character. Having that much settled the evidence shown by the other lines of argument, that there are order, design, etc., in the universe, has much more pertinent force, since we have identified the agency or being who brought them about, so they are now known to be legitimate proofs of the character and attributes of that being, since they are his acts.

After the argument from cause and effect it would be most natural to take up the cosmological argument, or the indications inferred from the orderly state of everything in the universe. That there is such order is beyond question. Everything in the world and in the solar system seems to follow orderly lines of arrangement and motion, and there is good reason to believe that the same is true of all the rest of the universe. The very possibility of science at all is dependent upon this orderliness in phenomena.

Now, as we have said, this fact taken alone would not have conclusive force. Even though we might refuse the suggestion that since they must have some order it is just as probable that they have this order as any other order, there is still left the answer that this order results from the operation and control of natural laws. But now that we have proved and know that there is a great being who started all this universe process, and that that being exerts acts similar to the voluntary acts of men, this act of starting all the universe process being one such act, then whether we call the producing of this systematic order in the universe "Nature," or however we choose to define it, the fact that it was produced in the act of this great first cause is an indication of his character and constitutes one more link of resemblance between him and us.

Moreover, since we know that there is a great being who possesses what in human phraseology we call "will" and "choosing power," it would be quite a plausible supposition that it was he that determined and established those uniform ways of acting which we call "Natural Laws" rather than that they were independent and conditioned his actions. Indeed to many minds it would seem imperative to conclude, if there were such a choosing, willing being, that he not only determined the starting and the character of the activities, but that the very energies and the material universe itself was all the result of his work. While we cannot say that this is demonstrably certain, yet it is of the degree of probability that in any

other sphere of scientific analysis would be accepted without question. That is to say, the law of parsimony would declare it much more plausible to believe that it was one and the same agency that established those two phenomena which we call matter and energy with all their laws, and started their progressive functioning, than to believe that from all eternity there existed these three, independent and self-existing entities, matter, energy and spirit.

It may be well to note here that the doctrine that God created all the material and energy in the universe out of nothing is not necessarily an essential part of the Christian belief about God. Most Christians believe that He did and so state in their creeds, and assume to infer it from the words of revelation. But the Bible does not pretend to treat with merely questions of metaphysical philosophy or science. What it states is that the universe which we know and of which we are a part was in the beginning constituted such as it is by God. It does not pretend to state more than that God is the author of all that we see and know, for anything more than that would be entirely outside of its religious purpose. It is most natural to want to believe, and it is by far the easiest and most satisfactory philosophical conception, that He made or constituted the universe entirely out of nothing, and He Himself is the only thing that existed before the universe was made. Indeed it is quite in accordance with the best canons of reasoning so to believe, but after all it is merely a question of philosophy or science, and not a religious question.

IV

TELEOLOGICAL ARGUMENT

WHAT THE ARGUMENT IS INTENDED TO PROVE

FOLLOWING the order laid down on page 30 the next line of argument would be the "Teleological Argument," the inferences drawn from the indications in nature that things and events have been so collocated as to conduce to the attaining of certain desirable ends or results. This argument will naturally be supplementary to the former two, and as far as it establishes anything will establish as attributes of the first cause a still higher class of attributes than are touched by them. Determining upon a desirable object and then assembling and directing the means suitable to attain that object, is considered one of the most characteristic and essential acts of what we call "intelligence" and one of the highest traits of the human mind. It is the province of the arguments drawn from this field to prove that fact with regard to the great first cause, that is, to show that he is an intelligent, planning being.

Here again, the fact that we have established the existence of this first cause, and so many of his other attributes, has most important bearing upon the

validity and force of this argument. Suppose, some time by the seashore we should see marks in the sand that looked like the letters of a word. They might have been produced by the wind or the waves and have no meaning at all. But if we definitely knew that they had been made by a man the case would be different, and we would then be justified in insisting that they were meant to convey the meaning they appeared to convey. Just so, when we know that the universe process was started by a great being similar in some respects to man's spirit, if we shall then see in that great process, which that being has started, phenomena that look like purpose or the assembling of means to produce a desired end, we would not be at liberty to suppose they might have just happened to appear so, but with more confidence may insist that they do bear that meaning and are his acts of purpose and the assembling of means to produce an end which he desired.

Perhaps the question may be raised, "What is a desirable result?" On what grounds do we call this result desirable and another result undesirable or indifferent? The answer is that the term is entirely a relative one. It means a result that corresponds with our wishes, or ideas of progress and what is noble and good. That in using means to produce results the great first cause always produced results of this description therefore proves that in this respect also his mind was similar to ours. The results that he is thus shown to esteem as desirable are just the results that our highest thoughts also esteem to

be desirable. This is another important link that proves the similarity of his nature to ours, or as we consider more fitting to say, of our nature to his. It is one more indication that there is such a similarity that we can confidently assume that all the higher attributes in our nature are also present in the nature of the great "First Cause."

REALITY OF EVIDENCE OF DESIGN IN STRUCTURE

The teleological argument was very forcibly and clearly stated by Dr. William Paley over a century ago. His principal line of proof was to examine the different organs of the body of man and animals, and show how beautifully and perfectly they were adapted to produce the best results in the life of the animal or man. Such a wonderful adaptation, he argued, could not have been accidental, but must have been the result of design in the agency that made man and these animals. From this he logically deduced that there must have therefore been an intelligent creator as the designer of all things.

With the coming in of the evolution theory it was for some time thought by many that the argument from design was entirely invalidated. It was thought that the theory of evolution furnished a complete explanation of all this adaptation to the needs of the animal life, naturally and spontaneously, without the necessity of any previous designing. And it is certainly true that Paley's argument, just in the terms and in the way he used it, is no longer usable.

But there are some things that we must observe

with regard to even his argument. First it was perfectly valid in claiming that all these adaptations of means to end do prove design. They do prove that there has been the operation of a being that was able first to have a worthy desire or object and then to adapt means to bring that object about. For notice carefully that all these instances of such perfect adaptation of means to end occur in the structure of beings with life. That is a fact that is not always sufficiently emphasized in the studies of organic evolution. Now one of the attributes of life, in the highest forms, namely, in man, is precisely this faculty of having objects of desire and adapting means to secure the desired object. In man this is very evident as a conscious act. As we go down the scale of life we see the conscious and deliberate exercise of such a faculty less and less evident, but the essential principle of such an act is present very far down certainly. I think we can identify it as present clear back to the very beginning and the very lowest organisms. There are admittedly exhibited by all living organisms, indeed by all living protoplasm, by every being that has life, certain actions and reactions upon environment, that are outside the range of merely mechanical causation.

It may seem at first thought that modern discoveries contradict this claim. It has been very justly claimed that all the processes of nutrition and growth, indeed all bodily functions, are pure chemical or mechanical processes; that there is no legitimate line of separation between organic and

inorganic chemistry. Of course the number of so-called "organic substances" that have thus far been produced by laboratory methods is exceedingly small comparatively, but the fact that some have been produced, and the marked analogy between many of the life processes and processes artificially produced in the laboratory, have convinced most scientists that the two processes are identical. Not only all the actions of the muscles but also all the actions of the various glands, of tissue making, or cell building and in fact practically all the activities that used to be classed as vital activities are pure chemical or mechanical reactions, and could be artificially produced in the laboratory, if only we had adequate knowledge and adequate apparatus.

This view is not only very plausible, but a little thought will show that any other view would be a contradiction of the harmony and uniformity of nature. Instead of belittling the functions of life or spirit it exalts them, and the old view really belittles them. The old view makes the life or spirit enter the same sphere and perform some of the same kind of acts that are performed by chemical and mechanical energies. It thus degrades it to their level and makes it seem, in part at least, an entity of the same grade and nature as they are.

But that is not the function of spirit. Its function is to *control or direct energies*. The chemical and mechanical energies do the work, and the spirit determines and directs what particular piece of work they shall do. This is equally true in the nervous

system and in a railroad system, amid the clang of a great iron works or in the silence of a tissue cell.

How it thus directs energy we cannot explain. And in the ultimate analysis we can no more explain in the one case than in the other,—how spirit directs the activity of the great iron works or of the tissue cell. But the significant point is that what it does, and what we would expect it to do if it did anything, is not to turn part of the machinery but to superintend and direct.

Now we know by experience or consciousness that in man there is such a directing and superintending agent of enormous resourcefulness. We can trace its activity from the purely voluntary motions down through the semi-voluntary motions and those of less and less consciousness, to the point where consciousness is entirely absent. As there is no indication of a break or limit anywhere we are irresistibly impelled to go still further and conclude that all the activities in the living body are under the control and superintendence of this same agency. That control or superintendence, in one sense, does not determine what kind of activity shall be exerted, as that is entirely governed by the laws of the chemical or mechanical energies that produce it, but what it does control is where, when and to what extent that activity shall be carried on. This, however, is sufficient for all purposes. It controls the result produced. It is the designing, not the efficient cause.

Evolution, by proving the continuity of all life,

has shown that this same agent, which has such marvellous directing power in man, is present in every living creature, down to the first primordial cell. With such a directing, controlling agent present, can it be doubted that it was concerned in all the myriad and continuous series of selections and adaptations which brought about the course of evolution? Especially since it is precisely adapted to do that, and it is almost impossible to conceive adequate causes for these things elsewhere, and also since there are actual observed indications of its activity in those lines in very low forms of organism.

Design, therefore, and the assembling of means to effect an end is one of the essential and fundamental factors of the evolution process itself. More recent biologists are inclined to give more place than formerly, in the list of factors producing evolutionary progress, to selection and adaptation to environment. Both of these agencies have as a very essential, fundamental element this same act of assembling means to bring about a desired object. Indeed, if, as evolution claims, this life which is actively present in all these living organisms from highest to lowest, and has a determining or regulating influence upon all their characteristic activities, is genetically the same and continuous throughout, and therefore the same as that which appears as the mental or spiritual part of man's mind, its wonderful mental activities being but the highest development and most advanced activities of this one and the

same agency, then it would not be a far reach of the imagination to suppose that all this upward progress and development might be classed in the same series and attributed to precisely the same agency as what we call in our experience invention and the practical conquests of science. It was but the earlier, simpler members of the series and these the later, more complex members of the same series, and all produced by the same agency, and in the same way. The psychical, living entity in living organisms by slow steps and infinitely repeated trials gradually invented pumping hearts and seeing eyes, just as later it invented steam pumps and telescopes.

But however that may be, it is certain that the process of evolution is dependent for its most essential factor on this very act of design, and adapting means to an end. It is acts of design that have brought about all this evolution and these perfected organs. Even if it be not in some instances a design that has a creative imagination but only a design that stumbles on happy inventions and perpetuates and reproduces them afterwards, let us remember what a large part of our boasted inventions and scientific discoveries are also of that same nature. In as far as "adaptation to environment" is a part of the agency of evolution we have therein, in all essential respects, design which does have a creative imagination. Paley was right then in asserting that the perfected organs and adaptation of means to end in animal structure prove a designer

as the producing cause. We have only found that that designer was the *indwelling spirit or life in the organism*.

But, in the second place, as has been often pointed out, since living organisms are very recent phenomena on this earth, their life principle or spirit cannot be the original first designer or producing cause. We have still to account for all the phenomena, plus the life that caused it. Paley's basal illustration was that "If I should find a watch in a lonely place I would conclude with absolute certainty from the evidences of design in its structure that it was made by an intelligent being." Now that is true when we think this watch was made single, alone and by hand. If we afterwards find that it was not so made but was produced in a factory turning out thousands of exactly similar ones daily, and all entirely by machinery, that does not lessen our conviction that there was intelligence concerned in its production, but increases that conviction a thousand fold. If it required intelligence to produce one watch with its intricate machinery much more would it require intelligence to make all the machines and the factory that could turn out these watches by the thousand. And more still to make a watch that had within itself the machinery to produce another watch that was identical with itself, even identical to the extent of having the same producing machinery. That is the situation that evolution and the recent studies of biology put before us. Life is the factory which produces all these

wonderful mechanisms. Who designed and built the factory? Certainly a factory with such marvellous capacities and adaptability could not have originated by chance without a designer.

The old problem as conceived by Paley was very crude and simple, and the inference drawn from it seemed much more obvious. Just because this latter problem is so very wide and complex, and so many elements of it go beyond the domain of observation and the material, mechanical world, many people are disposed to say that we cannot draw a sure conclusion. Their answer is the agnostic one, that we cannot or do not know the agency that built the factory,—that originated life and surrounded and endowed it with all these laws.

But the logic of the case is just as necessary here as in the simpler supposition. Granted that we cannot define all the elements of the producing agency, yet that does not invalidate the fact that we can identify one factor, namely, intelligent design. If something was produced that could only have been produced by intelligence even if a hundred other things were produced at the same time the first fact still stands and still compels the same inference. If it requires intelligence for a single hand-workman to make a watch it also requires intelligence to build and operate the great factory, no matter how many other things may also be required. In building and operating the great factory there may be necessary large capital, steady business connections and a number of other things, so that an ignorant man

might stand and wonder and think it utterly incomprehensible how it could be done, while he quite clearly understood how the hand-workman made the watch. But even so he would not and could not doubt that there was intelligence behind the building of the factory merely because there was much that he could not account for. Just so the initiation of life, the supplying suitable environment, the establishing all the laws and combinations which have naturally and continuously led up to the production of man with all his perfected organs, whatever else it proves necessary in its producing agent certainly proves that the quality of intelligence was there,—that all its work did not proceed by blind chance but there was in some degree an intentional direction of effort towards a certain preferred direction.

Life is a comparatively recent phenomenon in the world. Its advent must be accounted for. It is the machinery and factory that has produced all the beautifully adapted bodily organs. We have, then, the question whether it would require more intelligence to make the one watch by hand or to make the factory and machinery that will continuously produce them by wholesale,—whether it would require more intelligence for a creator to build up the body of man as our ancestors believed it was done, or to make this wonderful thing called life, which is continuously doing it. For notice, as we have pointed out above, that whatever assisting conditions there may be, it is always *a life function* that produces the progress that we call organic evolution.

That is the real factory that has produced the watch which Paley claimed showed evidences of design.

THINGS IN INORGANIC NATURE THAT FIT MEN'S NEEDS

We have spoken thus far only of design as shown in the bodily organs of living animals, as that was the illustration that Paley used for his famous argument. But a candid examination, I believe, will show in other fields also large numbers of coincidences that have very much the appearance of works of design, and especially, as already remarked, since we have by the former argument established the existence of a great first cause that in other respects has attributes similar to men's, seeing these coincidences appearing in his productions, the conclusion is the more probable that they were really designed, and so they help to prove that he is a being of intelligent thought.

Naturally we turn first to those things in nature that seem specially suited to the needs and pleasures of man and the other animals. We do so not only because such cases are the most obvious, but because they are about the only cases in which we are competent to see the design if it does exist. By design, as above defined, we mean that a thing is purposely made to conform to a previously existing desire. But we do not know definitely of any desires except those of men and other sentient creatures. We properly look for design, therefore, by looking for cases where events or things seem purposely made

to fit some need or desire of man and other sentient animals. The first step will be to find if there are things that thus fit these needs and desires, and the second step to inquire whether there is some other sufficient explanation for the coincidence, or whether there is sufficient ground to think it intentional.

As to the first step there is no doubt. The world is full of such things. So large is the range of things that meet the needs and desires of men and animals, that there have not been wanting men to claim that the whole universe is to be explained from the standpoint of some ministry to man's needs. While this of course is an extreme thought, yet it is truly wonderful what an immense number of different things and different events and agencies there are that are in some way serviceable to men and animals. Their number is now beyond reckoning, and new ones are being discovered all the time. It is only as to the second step that any inquiry is necessary, namely, whether we are warranted in claiming that all these, or any of them, were constituted intentionally with reference to their yielding profit to men.

Right at the outset we are met by a consideration that seems to throw a large number of these things out of the count entirely. It is a consideration that is quite fundamental in the evolution hypothesis. These things are adapted to man's desires because they have had a moulding influence in making man what he is. They fit man because he has grown into them. Or to put it otherwise, of a number of

possible creatures that might have developed had the conditions been favourable, that one particular creature that was adapted to the present conditions survived and the others died. Thus we might conceive that creatures might develop that could live only in an atmosphere of chlorine gas, or others only in hydrogen gas, others only in pure oxygen gas, and others only in a dilute mixture of oxygen gas. Of all these only the last, the kind that could live in a dilute mixture of oxygen gas, flourished on this earth, because that was the condition that limited it. There may or may not be other worlds where these other conceived kinds of creatures have developed because they have found there the right conditions, but in any case, the explanation of the perfect adaptation of the mixture of oxygen and nitrogen to animals' lungs is that only those animals have survived and developed to which it was adapted. Or, again, a certain very limited range of temperature is absolutely necessary to animal life. We find just that range of temperature prevailing on this earth to suit that need. But the explanation is that animals first began to flourish only when and because the temperature, gradually descending, reached that range, and the time will come when it will fall below that range and all animal life cease. Or, to take a more complicated instance, flowers have beautiful colouring, a thing that is desirable. But we are told that it is the colour that saves the flower and the plant just because it is beautiful and desirable. Insects attracted by the beauty light upon it and carry the

pollen away to fertilize other similar flowers, and so perpetuate the species, which would die out or not advance if it had not this means of fertilization. It is because the beauty is useful to the plants themselves that men and insects find so many beautiful flowers to delight them.

These are but typical instances of a large range of facts. Carbon, oxygen and hydrogen form the largest part of the bodies of all living organisms, and as if to meet that need we find them to be everywhere easily attainable. But the answer is that it is so because only the kind of organisms that depended on using those elements survived or developed. Had these elements been very rare and some other elements been as easily accessible as they are the race of organisms whose bodies were made up of those elements would have been the race of organisms to survive. Light and sound are both made up of vibrations, those of light being exceedingly swift and short and those of sound comparatively slow and long. There is a long range of vibrations both higher than light and lower than sound, and an exceedingly long range between them, but only these two narrow registers are useful to men, as light and sound. But just those two narrow registers are everywhere the most abundant. The reason, however, is that they being the most abundant animals and men have developed apparatus suitable to using them, namely, eyes and ears. Had some other grade of vibrations been the more common and these rare, as for instance those of the

character of the Roentgen rays or the ultra-violet rays, then the sensitive apparatus that would have developed with the developing animals would have been an apparatus suitable to discriminating and using vibrations of that character. Instances of the same nature may be multiplied at pleasure.

These considerations are valid, and must have a great influence upon our inquiry. Still there remain several questions to ask. First, are there any cases of such peculiar adaptation of the objects and circumstances of the world to the needs and desires of man and animals, which have no genetic connection with their growth or development, and so have independent meaning? Second, as to these others, though it is true that man has become what he is partly because they were here yet may they not still have some value as showing design in the agency that arranged for and started the course of evolution? Would some other environment have been able to develop creatures of as high a grade as the existing one has?

ADAPTATIONS WHICH DO NOT HAVE A GENETIC ORIGIN

First, are there any cases of adaptation to men's and animals' desires which have no genetic connection with their evolution, as outlined above; that is, that have not been caused by their desires or moulded the desire to which they conform? I think a close study will reveal many such. There are cases where the object that fulfills man's desire had

no possible influence in forming that desire. Even as to the cases where it is conceivably possible that there was some genetic connection, the number and variety of objects is so exceedingly great that it is hardly possible that all of them have that connection. For instance, it is an exceedingly interesting and clever explanation which shows how the cross fertilization effected by insects attracted by the beauty of certain flowers has caused the plants that had that beauty in their flowers to survive and advance, but it is a very far reach from that to the proposition that all the beauty and colour in all flowers is due to that cause. Besides there is very much of colouring in plants to which that will not apply, as for instance the autumn colouring of leaves, in fact all colouring of leaves and all colour in plants except the flowers, and perhaps only a limited range of that. Notice it is the beauty as beauty that we are speaking of now. The colour itself may have, indeed must have, a genetic reason in the life of the plant itself, but the fact that thereby so much of beauty is produced,—as a by-product, so to speak,—that is the coincidence which is now under consideration as possibly giving indication of design.

Not only in living plants but in all nature we find beauty. The sunset sky, the rainbow, the frost flowers and snowflakes, are but types of a beauty found everywhere in inanimate nature which makes its study always fascinating. Such beauty is not the exception but is everywhere seen and felt if only the eye and taste are a little trained.

Two questions arise with regard to this. First, is this beauty valuable to men and animals in the struggle for survival? and second, is the feeling of beauty itself merely a reflex of the mind responding to its environment? That is to say, these things, colours and shapes, exist, and merely because they do exist the mind adapts itself to contact with them and that adaptation or "comfortable contact" is the sensation that we call beauty.

As to this second question we may say that just the opposite is what we observe to be true. It is not what we have grown up in familiar contact with that we are most apt to appreciate as beautiful. That familiar contact has just the opposite effect and even with very beautiful objects, if we have long been familiar with them, we cease often to be impressed with this feeling of beauty at all.

The answer to the first question must also be negative. If the feeling of beauty in the things about us was an efficient factor in the survival of the fittest, then we would find it strongest in the savage who is nearest to the stage of conflict and survival. But we find just the opposite true. The savage in the midst of surroundings in which a cultivated mind would have an intense feeling of beauty has no feeling of beauty at all. It is the most highly developed mind, most able to see deeply and understand, that first comes to see the beauty in many things and has the keenest feeling of beauty in all things.

Here then we have a large range of facts,—a large proportion of the whole realm of beauty,—which

stands out independent, and is not merely a cog in the great machine of evolution. Whatever its value, greater or less, it is valid evidence. Doubtless all these facts that give this sense of beauty have had a natural genesis, either by evolution or otherwise, and we may concede that the taste or faculty of the mind, which desires these beautiful scenes and finds pleasure in them, has also had a natural genesis of some kind. But the two lines of genesis are distinct and independent of each other. One has not caused the other. They have produced these results independently. The coincidence to be explained is that the finished products match each other. The resulting shapes, colours, etc., exactly satisfy the resulting desires. All these colours, shapes and scenes, which have had their independent genesis, just fit this desire in the mind, which has had its own independent genesis. It is a coincidence that calls for explanation, however much or little weight it may have as evidence of design. Of course it might be but an accidental coincidence and nothing more. Still, the vast number,—the almost universal prevalence of these correspondences,—of these things that rouse the feeling of beauty and fulfill our desires, makes it very hard to suppose that it can be all merely accidental coincidence. And especially so since we know that there is a great first cause which started all this course, and that first cause has at least some of the attributes man's mind has, and might easily be supposed to have the intelligence to plan these coincidences also.

In answer then to the question asked, "Are there any cases of adaptation of the objects and circumstances of the world to the needs and desires of men and animals which have no genetic connection with their growth and development?" we have found at least one series of such adaptations, namely, many objects and scenes of beauty. Others could doubtless be pointed out in other realms, as for instance in the realm of the sublime, the realm of music and sound, etc., and all things that minister only to man's pleasure. With those things that minister to man's profit, however, it is more difficult to establish that they have independent genesis, for one of the claims of many evolutionists is that everything that is profitable to man's or an animal's life is so merely because the kind of animal to which that thing was profitable survived and the others to which it was not profitable perished. This may or may not be true, but at least it affects their value as evidence. We may therefore pass to the second question propounded, whether even those profitable objects that have helped to make man and the animals what they are may not still also have some value as evidence of a designing intelligence.

DESIGN IN ORGANIC NATURE

As to bodily appetites, pleasures and pains physiologists have a very simple explanation. Why does a wound give pain, eating nourishing food give pleasure, etc.? The answer is that they do not necessarily in themselves, but different sentient beings

would be differently disposed towards such things when they experienced them. Some, we may suppose, would feel a strong dislike to the sensation experienced when food was taken and a strong desire for the sensation experienced when a wound was inflicted. Others would feel just the opposite and others all gradations between. Now it is evident that those creatures that had a desire for the kind of sensation they experienced when they ate food would be more apt to eat food than the ones that had a strong dislike for that sensation, and a great many more of that kind of animals would live and bear offspring than of the other, and in a keen struggle for existence only that kind would survive, and the kind that disliked the sensation of eating, or had only a slight liking for it would not take the great pains necessary to get food, and would soon die out entirely. In the same way the animal that had a strong liking for the sensations experienced when wounded would not take pains to avoid injuries, and soon all of those species of animals would die out and only those be left that had a strong dislike for those sensations. In this way all the existing animals would have a strong dislike to the sensations of wounds and a strong liking to the sensations of eating, because all the animals that did not would have died out and only these be left. In this way is explained the genesis of the feelings of pleasure and pain, and in a similar way would be explained the genesis of all other desires or aversions that minister to the well-being of the individual.

Now this explanation, while only a hypothesis, is a very plausible and likely hypothesis for the most part. Still we cannot at all exclude the possibility that some or all of these desires may have been in all creatures from the start and not merely be the remnant sorted out of a large list of miscellaneous and contradictory tendencies which arose blindly without cause or design. However since such an explanation is at all conceivable we cannot use this fact of useful appetites and tendencies as proof of a designing creator, unless in any case there be sufficient proof that it was not thus caused by selection but had independent origin.

We may grant then this point, and throw out of the count all the bodily appetites, desires and tendencies, merely making one reservation, or calling attention to one consideration. The number of these appetites and tendencies, in the life, bodily structure and growth of animals, is so very great, and as each particular one is assumed to have been produced by a large number of gradual steps, each step only having "a fighting chance" of succeeding, the total number of all the steps necessary to produce all the useful appetites and tendencies must therefore have been something perfectly enormous, and the difficulty of succeeding and reaching the goal increases to some extent in a geometrical ratio with the number of steps. One wonders if all these desires and appetites did arise solely in that one way. And even granting that all progress in these respects has been merely following the line of least

resistance, it would not be an unwelcome suggestion to suppose, if there is an intelligence somewhere guiding the affairs of the universe, that that line of least resistance has itself in some degree been intentionally prepared and controlled.

STRONGEST PROOF OF DESIGN IN THE FACT OF A SUITABLE ENVIRONMENT

Leaving out, then, all these internal appetites and tendencies that are useful to animal life, there remains to be considered a very large number of external facts and circumstances useful to that life, and we must ask the question, How is it that life finds all these many useful facts and circumstances to aid it?

Here again the answer is made: "It finds them useful just because it has shaped itself so that they will be useful." In other words, "Out of a vast number of kinds of creatures that might have existed only those have come to being and survived to which these conditions were useful." At first sight this answer seems very plausible and satisfactory. In the illustration we have used above, there is just as much intrinsic probability of the atmosphere of this earth being chlorine gas, sulphurous acid gas, or any other of a thousand gases, in no one of which would man be able to live, but the remarkable coincidence that just the mixture of oxygen and nitrogen gas that is suited to man's needs is the very gas that forms the atmosphere of this earth where man is, is explained by saying that

as creatures developed in the course of evolution, just the kind of creature that was suited to live in such an atmosphere developed to fit it. If other kinds started to develop they would find the atmosphere unsuited to their needs, and so would not thrive, and soon die off, and only this kind to which this kind of an atmosphere was suitable would permanently live and develop.

While this answer is quite valid as far as it goes, yet it overlooks a very important consideration, which entirely changes the nature of the problem. Granted that this kind of creatures, and man as the highest member, have developed to this form because the atmosphere and other things were suitable to their developing to this form, yet the important question is: Had the atmosphere been different could a race of creatures as high as man have lived and developed in such an atmosphere? It is a question whose answer is to be found in the chemical and mechanical laws. If the atmosphere of this earth had consisted entirely of chlorine gas or sulphurous acid gas or some other substance, do the known chemical and mechanical laws teach us that it would have been possible to build up a race of creatures whose bodies were suited to live in such an atmosphere, and not only so but to develop them to the height that man has now attained. For if not, then the question remains: How does it come that out of the millions of possible kinds of atmosphere and environment we happen to have just the one kind in which a high order of creatures could develop?

We must notice that the protoplasm which forms the basis of all living bodies could not exist in such an atmosphere. We have therefore the chemical problem whether it is possible with other groups of elements besides carbon, oxygen, hydrogen, nitrogen, etc., to build up some substitute for protoplasm, with as many marvellous capabilities as protoplasm has, and like it suited to form a body that would be a good vehicle and instrument of life. For since our assumed atmosphere would not permit protoplasm to exist, if there is to be any race of living creatures at all their bodies must be composed of some other substance different from protoplasm, but a substance with as many marvellous potentialities as protoplasm has. But chemistry knows of no other group of elements that are capable of anything like the vast number, complexity and delicacy of combinations that the elements which form the basis of protoplasm are capable of.

Moreover in order to maintain that there is no evidence of design in the process of evolution we must be able to show, not only that other groups of elements are capable of building up a substance analogous to protoplasm, capable of being the vehicle of life, and indeed capable of sustaining and developing just as high a form of life as we now have, but practically we must be able to show that any group of elements whatsoever that might be selected would be equally capable of doing so. For by varying the nature of the atmosphere, and of the other elements of our environment, as described

below, we could easily bring about or posit a state of affairs in which any given combination of elements would be the only one that could easily and spontaneously be made use of for building up life structures and so only animals whose bodies were composed of those elements could live. But thus far chemical research has not found a single other group of elements that exhibit any approach to such possibilities of combination. To suppose that any and every possible group would have such possibilities is directly contrary to all the teachings of chemistry and supremely improbable.

Unless then we can maintain that every possible group of elements would form an equally good material for the building up of life structures we have to face the question: "How does it come that in this world there is an easily available supply of each and all of that group of elements which alone of all the elements is suited to build up living organisms and sustain a high grade of life?" For we must remember that intrinsically any other condition or distribution is just as probable as the one we have. It would be just as intrinsically probable that the surplus of gas left free to form the atmosphere should be any other gas, even helium, argon, or any of the most rare and scarce substances, as that it should be oxygen and nitrogen; indeed there is no intrinsic reason why those substances should not be extremely abundant and oxygen and carbon as rare in the universe as they seem to be.

Indeed from the standpoint of the mere "law of

probabilities" it is a most marvellous thing that there should be any free oxygen in the world at all. Oxygen enters into combination much more easily, and with a very much wider range of other elements than perhaps any other elementary substance. We should naturally expect, therefore, that every possible bit of oxygen would have found some substance it could unite with and be all locked up in such combinations. Instead we find that, with one exception, it is the only one of all the elements that is found in any large quantity in the free state, and it is found in that free state in immense quantities as though just waiting to be used as the great dynamic force for all the world's activities. How does it come that there is this great surplus of just this one elementary substance of which it is very much more improbable than of any other that there should be a surplus? And the whole process of evolution is absolutely dependent on it.

This fact seems to indicate a designing mind somewhere behind phenomena. We do not therefore get rid of all evidence of design by showing that animals and man have merely grown to fit the atmosphere in which they found themselves. The question still remains why there happens to be this particular kind of atmosphere, which, as we have seen, is the only one out of thousands of equally probable ones that would sustain and develop a high form of life. It is there that we find it difficult to believe that there has been no intelligent mind purposely arranging things in the universe so as to produce a desirable result. It

is there that we find evidence of design in the process of man's evolution. Every breath of air we breathe is a proof of a designing mind existing somewhere behind the phenomena of this world.

But it is not only the atmosphere that has a vital connection with life. The easy abundance of water is also a vital necessity. Now water, or its constituents, oxygen and hydrogen, enters into countless combinations with other substances. It is only a comparatively very small fraction of the whole amount existing in the world that is left in the free, uncombined state of water. We do not find lakes and seas of free hydrochloric acid, sulphuric acid, or any other of the large number of other liquids, of which there was just as much intrinsic probability of there being a free surplus left to be the liquid of the globe. So vast is the comparative quantity of the water and all these other compounds that is in hard and inert compounds in the solid material of the earth, and so very small proportionately is the amount that is free as water, that had there been in the material that condensed to form this earth even a very small per cent. less of the elements that constitute water, and a fraction of a per cent. more of the elements that constitute some of these other liquids, instead of having rivers and oceans of water we would just as normally have had rivers and oceans of sulphuric acid or nitric acid or some other liquid.

Here again, then, are a thousand possible conditions, none of which would make possible the life of the creatures that now exist, but by the supposition

in question there must be a separate substitute for protoplasm capable of being formed out of each separate one of them that would be capable of developing as high a race of beings as man is. And not only so but each separate one of these different kinds of liquid oceans might come in conjunction with a different kind of the very many possible kinds of atmosphere discussed above and each different conjunction would form an entirely different environment, requiring a different kind of creature to thrive in it, and all these must be kinds of creatures that were capable of developing to as high a condition as man has. And by "different kind of creature" is not meant merely a different species, as horses differ from cows, for instance, or even as mammals differ from insects. The fundamental conditions of life,—the protoplasm in their bodies,—is the same for all these known species. It must be a different kind of creatures, whose bodies were composed of a differently composed protoplasm, for each of these different possible combinations of environment.

Now a thousand different kinds of atmosphere and a thousand different kinds of liquid composing the possible seas, would make possible a million different possible combinations or environments and a million different kinds of protoplasm to form the kinds of bodies that would thrive in each environment. Of course any such supposition is entirely impossible.

But this is not all. These are not the only important things in our present environment. The character of the soil in which plants grow has an

essential connection with their production, and animal life is conditioned by these plant productions. Now suppose that instead of compounds of aluminum, silicon, calcium, etc., forming the main bulk of our soil, it had been some other elements, say arsenic, radium, iodine, etc. It is evident that none of the life that now exists could exist in such a world. It must be an entirely different kind of creature formed from a different kind of protoplasm that would be rendered necessary by each separate combination of preponderating elements in the soil. Here again, then, would be thousands of possible different environments, each necessitating a different kind of protoplasm and different kind of creature, and each or any one of them was just as intrinsically probable as our present kind of soil. Moreover each one of these different kinds of soil might have occurred in conjunction with each or any one of all the thousand possible kinds of atmospheres, and thousand kinds of possible liquid oceans. A little computation will show how nearly infinite are the number of possible different environments, and each one just as intrinsically probable as any other, or as our present environment. According to the hypothesis under consideration any one of these must have produced a race of creatures that would have developed as high as man has, if it had happened to be the particular combination and proportion of elements that existed in the universe. But such a supposition is certainly absurd.

In all the above we have spoken only of the

quantity and distribution of material elements. There still remains all the vast question of the laws that regulate the interaction of these elements. Here again we find that of the thousand laws that coöperate to produce the conditions necessary for the high development that exists, if but a single one had been different it might have blocked the whole progress and rendered impossible any living organisms at all. Take one very easy instance. Oxygen combines with nitrogen just as naturally as with sulphur or carbon, and the resultant is a series of very active acids. Suppose that it would unite with it spontaneously as it does with almost all the other elements. Suppose that nitrogen gas would "burn" like hydrogen gas or common illuminating gas. The result would be that the first spark of fire would cause the whole atmosphere to catch fire and burn up in a vast conflagration producing a vast sea of nitric acid and every particle of oxygen in the atmosphere would be used up and none available to breathe.

This is but a single instance. There are thousands of other cases where a very slight change in the laws that govern the atomic interactions or change in some other natural law would render entirely impossible all forms of life of the order that now exists. This too must be taken in connection with what is said above about material elements. It was shown that on the basis merely of the quantity and distribution of the material elements the chances would be millions to one against the probability of condi-

tions suitable to develop a high grade of living beings. When we take into consideration then all these natural laws, the adverse chances would again be multiplied a thousand fold.

We must take into consideration, too, that as far as we are able to determine, the condition of all the rest of the universe is the same in all these respects, as our world. It is true that there are many millions perhaps billions of different worlds or bodies in the universe. But we may not say that that helps to balance the adverse chances, and this is the one suitable one out of the billions of unsuitable ones. There is every reason to believe that the relative quantity and distribution of material elements and the laws that govern them are substantially the same in all of these billions of worlds and suns. The common theory that they are all parts separated off from the one great, original homogenous body, or immense nebula, would imply this, and all the results of investigation by spectrum analysis and other methods confirm that view. This world is not one world out of billions of worlds of different characters, which just happened to be the variety that was suited for a high form of life. The fact is that the whole universe,—the only universe that exists as far as we know,—when it came into being came into being fitted up with just the quantity and proportion of the right kind of elements, and with just the necessary natural laws to make possible and lead up to a very high form of living creatures though so many factors and conditions were neces-

sary to coöperate for this end that the chances were thousands or millions to one against the necessary conditions being brought about by chance.

How does it come, then, that out of the millions of equally probable ones we happen to have just the one combination of natural laws, and of atmosphere, ocean, soil and other things, which is capable of sustaining and nourishing a kind of protoplasm that can form the bodies of a high order of living beings? That is the coincidence that cannot be a mere chance, and seems to point positively to some kind of intention or designing thought behind the condition of the existing universe.

As a biological principle this principle of adaptation to environment is undoubtedly valid. There is no doubt that animals and men have developed to fit the environment which they found existing, and that accounts for the fact that this environment so perfectly fits them. But the real significant question is, How does it come that the existent environment is one just suited to draw out and develop *such a high race* of creatures, when the intrinsic probability was only one in millions of its being so? Granted that it is just the mould into which the evolution forces and tendencies have run, and the fact that it has shaped the race of living creatures accounts for its perfect correspondence to the needs of that resultant life, but the question still remains,—*How do you account for that mould?* It is such an intricate mechanism, so perfectly adapted to produce a high result, and the lack of a single one of its thousand

parts and adjustments would have rendered it entirely unable to produce that result. There is where the real evidence of design appears.

Whether or not there might be some other kind of environment that could have developed a high race of living beings it is certainly true that there are millions of possible combinations that could not, and any one of those millions of combinations was originally as intrinsically probable as the combination that now exists. The conclusion is just as valid as it was in Paley's time that it is illogical to suppose that this could all have happened entirely by chance.

But more than that, we have already proved in the previous sections that there must have existed at the beginning of the great universe process, and as the agent that initiated it, some great agent which, in at least one respect, was similar, on an infinite scale, to the human soul. Indeed we saw that it was very plausible to suppose that he possessed all the fundamental attributes the human soul possesses, including, of course, the faculties of intelligence, reason and design.

With such a being as the originator of all this great universe process, when we find such intricate and marvellous coördination of conditions in the process which he initiated, is it possible to doubt that he intended them to be so,—that he designed and purposely arranged that they should be so? How he did it,—whether by creation or selection,—science perhaps may not be able to answer. But

when we see this great universe process started by a being that has at least one of the most fundamental features of men's minds, and then see in that process a thousand adaptations that have every appearance of being the result of purpose and thought, it would be an extreme prejudice that could think of doubting that, like man's mind, that being also exercised purpose and thought, that he assembled all the conditions to produce just the results he desired,—that this great universe process is just the progressive carrying out of a designed purpose in the mind of that agent, or God, just as man's act is but the carrying out of a purpose in his mind.

It is in that sense that we shall hereafter consider this great universe process, or "the process of evolution." It is all carried out naturally by natural laws and energies, just as every act of man is entirely produced by physical energies and natural laws. But just as the act of the hands, feet or tongue is really the expression of the purpose in the mind of the man, just so every result produced in the evolution process, though equally produced by physical energies and natural laws, is really the expression of the purpose in the mind of God. We can judge, therefore, of the character and the wishes or will of God by the character of what He has done.

OTHER LINES OF ADAPTATION TO NEEDS

If it is once established that there is a designing mind behind all things there will be found very many things that can then be recognized as beauti-

ful instances of his design. To take one instance : The human mind grows by exercise, study, mastering difficulties. Now if we were to try to devise some environment best suited to draw out the powers and develop the human mind, we could hardly conceive of one better adapted than this world in which we find ourselves. There is material to call out the thought and interest of all classes, the most simple and the most complex ; simple shapes, sounds and colours to keep the infant mind active, and the greatest scholar still finds problems and interesting intricacies to keep his mind ever struggling onward. If there are marvellous facilities in the physical environment to evolve a high grade of bodily structure, much more marvellous is this adaptation of the mental environment to evolve to the highest efficiency this more important spiritual side of man.

We may close this discussion of the teleological argument with just one more line of thought which, while not a conclusive proof of design taken by itself, yet when we have already sufficiently proved the presence of a designer, adds an interesting instance of his designing thought.

Suppose some skilled mechanic should find himself placed in some large building, and suppose that after a while when he should take a notion to do some nice piece of mechanical work he should find a suitable tool there to work with. As he should go on to more and more intricate work, requiring many, most varied and most intricate tools and machinery, he would always find in some box or drawer just the

tool or machine adapted to do that particular kind of work. Would any one be able to persuade him that it was all merely a fortuitous coincidence, and there was no evidence of the work of a thinking mind there? He need not, of course, suppose that those tools and machines were made purposely for him to use, but the very fact that all those tools and machines, just suited to do the kind of fine skilled work that he could do, were all there ready and prepared, would be positive proof to him that some one had been there before him that had the same knowledge of mechanical arts that he had. Even if he found some of those tools and machines locked up in drawers and boxes hard to open, or stored away in places where they were very hard to find, it would not lessen at all the certainty in his mind that their presence there was the result of thought.

Now what are all the inventions and scientific appliances with which the world is so full to-day but tools and machines adapted to the production of all kinds of skilled work? What an enormous number of such tools there are which we catalogue under the general names of mechanics, electricity, chemical affinity, etc. Perhaps at first thought we say: "Those tools are our inventions, made by us." But not at all so. We have merely discovered them. All these various powers and laws existed just as much before we knew of them as they do now. All we have done is to discover them, open the boxes and drawers in which they were stored, and assemble together the articulating parts to set the machine in

motion. Is it possible that the one who provided all those tools and machines and articulating wheels had less intelligence and less knowledge of mechanical arts than we who so belatedly discover them and so clumsily use them? We may conclude, then, that the great law of evolution has not banished the proofs of design from the world but has rather made them stronger and more wonderful than before. The whole course of organic evolution is a process of adapting means to ends by living organisms, and "life" is a great "factory" whose origination required far more designing skill than the mere building of a body which Paley's argument proposed. Many of the adaptations in nature to the desires of man have no genetic connection with his evolution and are therefore significant coincidences. And of the vast range of facts that have aided his advance, forming the environment that moulded his character, we may ask, How does it come that with such an enormous probability against it there should be such a very favourable environment? There is the supreme proof of design. The whole universe and every fact and factor in it is instinct with purpose, and is all the intricate and perfectly articulated design of the great infinitely perfect mind. Evolution is but God gradually unfolding His great universe thought.

V

OTHER LINES OF ARGUMENT

WHILE the arguments we have already considered are the main ones that are most commonly classed under "Natural Theology," there are various other considerations based on various aspects of man's nature and tendencies and the conditions of human life, that are also significant, and that have special value as showing the character of the designing "First Cause," especially after the fact of such a designing first cause has already been established by the other lines of reasoning.

There is not room here to consider all these at all in detail, and especially since for the most part their form and validity have been less affected by the researches of modern science there is less need to do so. Among them are arguments drawn from man's conscience, or moral nature, from man's religious tendencies, from the general upward trend of human society and from various other more or less abstract or sentimental considerations. We may say just a word about one or two of them.

Man has a conscience. There is something in his nature that tends to restrain him from doing certain acts on the ground that they are "wrong" and to urge him to do certain other acts on the ground

that they are "right." There is significance in the bare fact that he spontaneously makes the distinction of "right" and "wrong." And there is more significance in the fact that there is within his nature this something that spontaneously tends to restrain him from doing the thing that he has classified as "wrong," merely and only because it is wrong, though in every other respect he has a distinct desire to do that thing.

It has been quite common to say that this is the direct stamp of the authority of the creator upon the soul which he made. It is the spontaneous recognition by the soul of a higher power over it to which it is bound to render obedience. Since this tendency is inborn, spontaneous and universal, it must represent a real fact. It is a tendency to recognize the authority of a supreme moral ruler, and therefore the existence of such a supreme moral ruler must be a fact.

Most scientists to-day, however, are not willing to admit that this tendency cannot be explained as the result of purely natural, well understood causes. They claim that it, like every other tendency and propensity of man's nature, developed naturally under the ordinary laws of evolution from the first primordial life germ. But even if we admit that its origin can be thus accounted for, that does not destroy the value of this fact as an evidence of the existence of an intelligent and moral first cause. The same question that we asked so frequently in the previous argument may be asked here also. Even

granting that this idea of rightness and wrongness, and this feeling of obligation to do the right and not do the wrong can all be accounted for as the result of the natural laws of the universe, how does it come that the universe happens to contain just such a collection of tendencies and laws as to produce in man this feature which so immensely tends to make him a higher and nobler being?

This question gains more force when we remember that we have already shown that the existence of high orders of living creatures on the earth is certain proof that there must have been a designing agency among the causes that led up to the universe becoming what it is,—that the “First Cause” must have been a being with designs and purposes, who established or directed forces, things and events purposely to bring about desired results, and that *the trend of evolution shows the character and desires of God*. If the appearance of the first life germ, and its development all up the course that culminated in the splendid being, man, was not a merely fortuitous occurrence but a deliberate achievement of a designing and purposing being who used appropriate means to bring about the kind of being that he wished to produce, then we can reason from the nature of the being that has been produced what was the desire and purpose of that designing “First Cause.” The fact that man does possess a conscience,—the feeling of right and wrong, and of obligation to do right and avoid wrong,—is proof that his creator wished him to have those tendencies

and took the necessary steps to secure that he should have them ;—in short that his creator gave him those tendencies, and therein stamped his own will upon man's nature ; not indeed in the crude method of the old "Carpenter theory," but in the higher, more wonderful method in which we are now coming to perceive that all the infinitely articulated totality of existence is the infinitely comprehensive thought of an infinite designer.

Perhaps we should note an objection that may be urged at this point. If all things that exist show the thought of God, and the moral nature of man thus gives us teaching as to the character of God, it may be urged that the presence of wrong and sin in the world would then prove the presence of sin in God's character. But the answer to this is that in the view of science sin is not a something that has been made so much as a remaining impediment in the course of making and an incompleteness as yet in a progressing work. It is, so to speak, the chips not yet chiselled out of the statue being formed,—the astringency of the unripe fruit. Indeed many of the things we call sins are acts that at some time in the history of development have been, to the progenitors of man, not wrong but normal and acts that were right, and necessary to their highest progress. They are wrong now because man has advanced to a higher plane of being. He has taken upon himself a higher destiny, to whose conditions his character has not yet fully measured up.

He is, however, slowly and gradually reaching up and approximating towards such a higher character. And we must remember that it is the *direction of the progress* and the goal aimed at that shows the character and thought of the one who planned it all. It is therefore the moral judgments and moral aspirations of men that have significance as showing the character of his creator, not his sins and faults which are repugnant even to his own higher self and which he is progressively striving to eliminate.

There is validity therefore in these arguments from man's moral nature, as showing not only the presence of thought and design in the great "First Cause," but also as showing what is the character of his thought and purposes,—that it lacks nothing of what we find in our own highest conceptions of right and moral ideals.

Closely allied to this argument from man's moral nature is another which is based upon the universal prevalence among all races of men of belief in some sort of a being or beings over them under whose power they are. Suppose we here again admit all that is claimed by the most thoroughgoing evolution hypothesis and consider this belief entirely the product of the evolutionary process. In that case we are still warranted as we have above shown in claiming that it was the intention of the "First Cause," which stands back of and conducted the evolutionary process, to produce that belief in the creature that was to be evolved, since that belief was

produced. And furthermore we are warranted in taking as the form of the belief that the creating agency wished to have formed, not the crude lower forms found among savages but the very highest form of such belief that has yet been produced. Now we find that the higher the moral tone and the more determined the moral purpose of a community or an individual, the stronger, as a rule, is the tendency to believe in the existence of a supreme being, and the higher and nobler is the conception of the character of that supreme being. This shows the tendency and direction of the evolutionary process in this respect, and that highest conception of God may therefore rightly be taken as the one, or the nearest attained approximation to the one that the author of the evolutionary process designed to have produced in his highest evolved creatures, and so may legitimately be taken as his own thought in that respect,—that is to say, as the truth about his own character.

PART II
Revelation

I

DEFINITION

REVELATION NATURALLY FOLLOWS PROOF OF GOD'S EXISTENCE

HAVING considered the evidence of the existence of God in the sphere of natural theology, or "Reason," the next in order will be the subject of revelation. The testimony of revelation is more directly to the will and thoughts of God rather than merely to His existence. Our order, therefore, is the logical order. We first found by the argument from cause and effect that there must be some other great agency operative in the universe besides the known mechanical energies and laws. This was the first step and foundation. Proceeding, we showed by an extension of that same line of argument, that that "other great agency" did what is done on a small scale by the spirit or life principle of man, and it was therefore fair to suppose that it had all the powers that man's spirit has. Next by the cosmological argument, and especially by the teleological arguments, we corroborated this supposition, and showed that there has actually been done, in the establishing and developing of the universe, most of the acts that are characteristic of man's highest mental activity. First there is what our

minds recognize as a distinctly concatenated order in all things. Next we see in a number of different lines there have been very high results produced by the coöperation of a very large number of forces and conditions of such a nature that the change or lack of one would render the high result impossible, and so there was an enormous proportion of improbability that the high result could be produced unless these forces and conditions had been purposely coördinated to produce that very result. In this way we saw proof not only of the purposing or thinking power of the great "First Cause," but from the nature of the objects which thus are shown to be the desired aim which he planned we see evidence that his desires run along the line of what we also consider to be the highest and best things, and so there is a similarity in his nature to our highest selves. Finally, by the "moral argument," "religious argument," etc., we saw indications that his will includes desires for our guidance into certain lines of conduct and a certain relation of obedience from us towards him.

Having gone thus far by reason and the evidence of natural religion in discovering the character and will of God, it is manifestly the next logical step to see if there is anywhere any definite, personal declaration from Him to us of thoughts with regard to us, and if so what it is. In other words, the next necessary inquiry is the question of "revelation."

In considering the question of revelation there are four important inquiries that we must make, or four

principal divisions of the subject. First: The meaning of revelation. Second: The fact of revelation. Third: The manner of revelation. Fourth: The content of the revelation.

MEANING OF THE TERM "REVELATION"

Among writers on this subject there seems to be a great deal of inexcusable indefiniteness in the use of this term "revelation." In the older theology it was considered that the Bible was the "Word of God" and its text and phraseology were what He definitely wished and procured to have set before men as a communication from Himself, just as the books of Shakespeare or Spencer are from those individuals. It was under this conception that the Bible attained the place of preëminent honour and authority in religious minds. And as though corroborating this there is seen the enormous influence for good which the Bible has exerted in the world.

The opinion of some modern writers on the subject is almost the opposite of the above, and yet they still choose to retain the old term and call the Bible a revelation. Its origin and genesis is entirely the human mind groping after the light. It is full of errors both of fact and teaching and comes with no other outward authority than the reliability and wisdom of the men that wrote it, and yet since there is much in it that is conceded to be true teaching about God, it is still accorded the title of a "revelation" of God.

Of course it is possible to so define the word that

anything that reveals anything about God may be called a revelation of God. His providence reveals His character and what we may expect of Him. The wonders of nature reveal His power and wisdom. In fact, since He is the author and creator of everything that exists, everything that exists is in some degree a revelation of God. By thus widening the definition we really deprive it of any real value. If everything that exists is a revelation of God there is no object in calling a certain book a "revelation of God."

It will be useful in the interests of clearness of thought to analyze the various ways in which knowledge can be conveyed or a "revelation" made. In the first place we may divide into two great divisions, "Unintentional," and "Intentional." The apple falling conveyed knowledge to Newton, and the jumping teakettle lid did so to Watt. But they both did it unintentionally. The opening of the buds in the apple tree and the crying of a new-born babe both convey information, but it is entirely without purpose or intention on their part to convey it. Not so the crying of that same infant a year later. There is then present a very definite intention to convey some information. The same is true of all speaking, writing, and signalling, of physical or chemical demonstrations and mechanical instruction of all kinds.

But this latter division of "intentional communication" may also be divided into two classes: (1) If I have a wish or intention to convey to you some thought in my mind I may do it by exhibiting to you

some article, act or process with the hope that you will infer from it the thought I have in mind, or (2) we may have a prearranged system of symbols or some other device to represent all various kinds of thoughts and by that means I may convey directly and exactly the thought in my mind to you. I have a piece of iron and I wish to convey to you the knowledge that it is cold, is black or is heavy. I may touch it to your skin, hold it before your eyes or place it in your hand with the hope that you will thereby notice this fact that I wish you to know. Or I may use a set of prearranged symbols,—namely the words of our language,—and convey to you directly and exactly the thought in my own mind which I wish to convey. Or if it be proved that man has the power of conveying thoughts directly and immediately by the process commonly called “telepathy,” that will constitute an interesting variety of this second division or way.

There is still another grade or kind of revelation that would properly be classed in this second division. It is more properly called “inspiration,” perhaps. A writer is supposed to use all his own faculties and natural resources in the acquiring of truth, but at the same time God both guides and aids him so that he discovers and proclaims certain truths that God wants proclaimed, and, in addition, when he has published his message God, in some way, adds His indorsement, so to speak, or confirms the message as expressing His own mind. It is just the same as when a business man orders his secretary to write certain

letters, furnishing him facilities, information and more or less direction, and afterwards reads over what he has written and signs it. Such a letter is rightly called a communication from that business man. It is the authoritative expression of his thoughts, though all studied out and composed by the secretary. Perhaps the greater part of what we call "revelation" in the Bible is conceived to be of this character. In just the same sense it is an authoritative expression of God's thoughts, and so a "revelation." There are many cases, however, where the communication is made more directly by God, and these we will consider first and specially.

Now if we are to use the word "revelation" with any distinctive meaning we must exclude from it all knowledge conveyed in the first way above, that is, unintentionally and merely by the things or acts themselves. That is precisely what is considered in "Natural Theology," and if we are to make a separate division under the title of "revelation," we must mean something else by it. At least we will use the term so here, limiting it to knowledge intentionally conveyed.

It will be necessary to make a still further restriction, with regard to knowledge intentionally conveyed, but conveyed by means of the things or acts themselves. In the case of God it would be difficult to discriminate when the act was done to teach some truth, and when the truth taught was unintentionally conveyed. Unlike the case of a school-teacher or demonstrator, we can hardly conceive that God

would very often perform an act merely and only as a demonstration to exhibit a principle. He would rather exhibit the ordinary acts of nature and providence in such a way as to lead men to perceive and ponder the thoughts they convey. Moreover, on the other hand, every act of nature and providence is adapted to convey some thought of some kind. If God is really omniscient there can be no such thing as unintentional conveying of knowledge by Him. In as far, then, as any act of nature or providence or anything of God's creation conveys any true thought to any man we may say that it was God's intention that that thing should convey that thought to him.

It will be proper then to exclude from the use of the term "revelation" all knowledge conveyed merely by the things or acts themselves, except in cases where God, for instance, through a prophet or inspired writer, specially holds up those acts or facts to view or calls attention to them as teaching a lesson

HAS GOD EVER MADE SUCH A REVELATION

So much then for the definition of revelation. The next question is as to the fact of revelation. With the definition and restriction of the term made above, has God ever made a "revelation"? Has He ever intentionally and directly conveyed His thoughts as thoughts to a man? Has any man ever received a communication from God in the same sense as he receives communications from other men? There is the real problem of "revelation." It does not lie in

the questions about the evolution of religious belief or the construction and origin of the Biblical text, or matters of that character. Those are questions that have their importance, but this is an entirely distinct question. It is a question much more fundamental, and we may believe very much more important than any of those others. The crucial point is that God has a certain specific thought, wishes some man to receive that thought, and takes appropriate means to communicate it to him. Perhaps in most cases we might add that he would not have received the thought if God had not thus communicated it to him, and that he receives it in such a way that he recognizes it as communicated by God and carrying God's authority.

It is very important to focus the attention on this one question. If God has never in such a sense made communications to any man then the main basis of all our religious beliefs is false. It certainly is a fact that the Christian world to-day has gained almost all its conceptions of God and eternal life through believing that the Bible is a revelation from God in just that sense. If it is not that does not necessarily mean, indeed, that we must entirely give up our belief in such a God and heavenly Father as we have hitherto trusted in. It does, however, destroy the evidence which we have hitherto trusted in as evidence of His existence and it does make necessary an entirely different attitude towards religion and a radically different basis for our religious belief, if we keep it.

If on the other hand it is definitely decided that God has made such personal communications to men, all the problems as to the inspiration and interpretation of the Bible will be very much more easily resolved, for very much of the difficulty in Bible interpretation comes from the effort, conscious or unconscious, to eliminate, or at least minimize the so-called "supernatural" in the book, that is, to recognize as true nothing, or at least as little as possible, that could not have been produced by the natural processes of man's mind. If it is once fully decided that God has made such communications and that they are to be looked for and expected as normal, then many things can plausibly be accepted just in the form in which they are given, whose recasting or explaining has furnished the great tasks to the critics.

There is possible an intermediate conception, that God has made communications to men but they have always been of the most rudimentary character. He has at times used direct means to get men to think certain thoughts that are in his mind, but it has only been by exerting the minutest and almost imperceptible influence upon the natural current of their thoughts, reasoning and perceiving in the natural way. It is in favour of this view that most Christians believe they can receive some such sort and measure of divine communication at the present time. According to this conception the attempt is made to account for a real communication from God given in the Bible on the basis of only such a

measure and kind of communication from God as men are constantly receiving at the present time.

Perhaps the views of most Christians would be divided between these last two conceptions, the former being the traditional view and the latter the view of the moderately rationalistic school. As to this latter view it must be borne in mind that it necessitates an entire reconstruction of our attitude towards religion and a different conception of the basis of religious belief, almost as much as the view that there is no real revelation as stated above. Both views hold alike that there is no higher tribunal in religious belief than the present processes of our thoughts and experience, the only difference being that the last view holds that this "present process of our thoughts" has a divine element in it.

As to this last view, too, it may be said that it is theoretically unsatisfactory. If God intentionally communicates His thoughts as thoughts to men at all it requires some explanation why He should always communicate them in infinitesimal quantities and never with the full force to produce assured conviction, as one man does with another. Of course it is conceivable that in an age when the chief task of the world is to study as fully as possible the systematized operations of power that we call nature the divine mind might deem it best not to make any revelations in a form that would interfere with or detract interest from the full pursuit of that study, but to say that in all the ages when that reason did not exist and especially when the "new creations"

of the foundations of religious belief and moral practice were being first formed, God then also, though fully committed to the principle of making revelations, still always confined His revelations to the infinitesimal and the comparatively unperceived form this view proposes, is quite another question.

It is true that in any case the question, whether revelation has been made and what kind and degree of revelation, is a question of historic fact to be determined by the ordinary process of historic evidence ; still, since it is made by many critics one of the canons of that historic evidence that there is a presumption against an efficient, fully perceived revelation from God and the very fact that a given body of evidence affirms the existence of such a revelation throws suspicion on the validity of that body of evidence, it is of some importance to recognize that there is no more presumption against that view than against the view that supposes a mild, disguised and infinitesimal revelation from God such as is going on now in all our earnest religious thoughts. If belief in the latter is plausible belief in the former is equally, or indeed far more logically, plausible. Indeed such faint, unnoticed communications from God could only be made for the information they imparted, and so would be "Special interpositions to supply a lack," a thing very repugnant to evolutionary thought, whereas a clearly evidenced form of revelation has a necessary place in the evolution scheme, as we shall see later.

II

SCIENCE AND REVELATION

SCIENCE DOES NOT DECLARE AGAINST A REVELATION

AS our discussion is from the view-point of recent science, the question is: What has science to contribute to the inquiry? We must answer that its contribution must be chiefly negative in form. In the nature of the case it cannot be expected to contribute much that is positive. The most it can be expected to do is to declare whether such a thing as a divine revelation is scientifically possible and probable, or if there are scientific reasons for believing that such a revelation has not been or could not be made. It is a matter of alleged historic fact to be studied by means of historic evidence and the dicta of science can only be of a supplementary or negative character.

For instance, suppose we find in a certain historical document the statements that in a given country water spontaneously ran up-hill and down-hill indifferently, that on a certain date the face of the sun became black, and that people in that country a hundred miles apart could converse with each other. Science could be called in to give some evidence on all these questions. As to the first case, of the water running up-hill, while science never can declare any-

thing to be actually impossible yet it would declare it to be so exceedingly improbable that it must be disbelieved. As to the second, it would declare that though an unusual appearance yet such occurrences were well known and so if the evidence for it was normal it should be believed. As to the last proposition the situation would be peculiar, for while science would declare that such a thing was quite possible and easy, yet if the time in question was somewhat remote, there would emerge the question whether there was any one at that time living that knew the process and had the necessary apparatus. If that only were established then science would declare that there was no presumption against it and if there was merely the normal weight of evidence for it, it should be believed.

As getting a revelation from God is something of the nature of the so-called "supernatural," that is to say, a thing that the ordinary people of any country and age could not do, the analogy is close with the last supposition above. And the answer of science must be of the same nature, namely, that if there was present some one who had the knowledge and the power to do such a thing then there is no presumption against it and if there was merely the normal weight of evidence for it that would be sufficient in other common events, it should be believed.

As to the moral objection, that it is improbable that God would depart from the orderly methods of His regular working to do a special and irregular act, that is begging the whole question, for by supposition it is only in that it is special that it has any use

at all, for it is an act whose whole design is by its specialness to give evidence of a personal being's presence and activity as we shall later more fully set forth.

The testimony of science, as far as it is competent to testify at all, is not adverse to the reality of a revelation from God, taking the word revelation in the strictest sense defined above, namely, the communicating of thoughts as thoughts directly from God to man, the communicating and receiving of thoughts between God and man in as real a sense and degree as when one man talks or writes to another and conveys the thoughts in his mind to him.

For notice that we have already proved by the various arguments of natural theology that the great "First Cause" is a being that is capable of having thoughts and does have practically all the mental apparatus that we have, and moreover that he seems to have specific thoughts and desires with regard to men's acts and character. This being so, not only is there no presumption against such a communicating of his thoughts and wishes by God to man, but there is a definite presumption in favour of its being done, and it would be difficult to understand why it should never be done, only provided there were any occasion where such a communication of thoughts would be profitable.

THE EVOLUTION PROCESS CALLS FOR A REVELATION

Really it is this last consideration that affords the only plausible ground to claim that a communica-

tion of thoughts directly by God to men is improbable. The objection grows out of the desire to interpret all things on a strictly evolutionary basis. The last stand of conservative thought in opposition to the evolution hypothesis was on the ground of "special divine interpositions" to supplement the general operations of evolution. The stricter evolutionary thought claims that any such special interpositions are not only unnecessary but are entirely illogical. But in making this claim they are misled into the error of supposing that that necessarily excludes all observable divine activity of a personal nature. The mistake lies in assuming that a personal act by God must necessarily be classed as a "special interposition."

The theistic evolutionists hold just as thoroughly as any one to the validity of all evolutionary processes, only they claim that the designing and directing power behind and in it all is the divine activity. The divine activity is not an interruption occasionally interposed but is the thing itself. Evolution is the systematic, continuous operating of divine activity as truly as all my bodily acts, though purely mechanical processes, are the acts of *me*, a directing spirit. That this is the true conception, all the arguments given above under the subject of "God in Nature" go to prove.

This being so we may readily concede that there will be no acts of God of a personal nature manifested in the evolution of the mechanical and physical world, and even of the lower forms of life. Indeed

it is logically hardly conceivable that there should be such personal acts in that sphere. They would not be appropriate. There would be no ground for them. But that does not at all imply that there will not be any personal acts anywhere in the scheme of evolution. The divine activity naturally acts on each thing in accordance with its character. In the purely mechanical and physical sphere it appears as the wonderful articulation of sequences which we call "Natural Law." In the sphere of life it appears as the mould into which the life tendencies run and the directing, coördinating design which makes possible the path of organic evolution. When we come then to the sphere of personality,—self-conscious, reasoning, intelligent humanity,—we naturally look for divine activity of a personal nature. Instead of such personal communications being a violation of evolutionary process they are strictly demanded by it. It would be a "break in the continuity and uniformity of nature," if there were not some such personal relations towards the emerging personal being whose nature is fitted to receive them and calls for them. Instead of personal communications being improbable or inappropriate the evolution hypothesis itself calls for them to complete its system.

For notice that it is not merely as a device to convey knowledge that could not otherwise be obtained that such personal communications are called for. Logically that is only a secondary or accidental effect, and we might concede that in the

evolution scheme it has no place at all. A communication from God merely to convey knowledge that was not otherwise attainable, or that some moral crisis demanded before the race had time to acquire it by other methods, however appropriate from a utilitarian point of view, yet savours so much of a "special interposition" and a defect in the whole scheme, as to be distasteful to evolutionary logic.

The real significant fact that we have to take account of, however, is as follows: In the course of evolution there has emerged a being of such a character as to be capable of personal relations with the great being who is the first cause, or God, and not only so but there are strong indications that God wishes this being to carry on such personal relations with Himself. By personal relations we mean such relations as one personal, intelligent being naturally has with another, as for instance one man with another. But the very essence of such personal relations in their highest form is the mutual intercommunication of thoughts. Only by that means can there be the highest state and feeling of companionship.

If God has made man capable of that kind of personal relation, and desires and expects it of him, we can hardly conceive of His not affording the basis for such personal relation and feeling, by Himself making personal communications to man, that being the only way in which it could be afforded. Not to do so would be as illogical as to expect fishes to swim and not furnish any water for them to swim

in, or expect planets to revolve and not furnish them with any attracting force to bend their paths to a revolution. For God to communicate with the evolving being as soon as he has evolved high enough to be capable of being intelligently communicated with is as logically appropriate as for life to appear on the globe as soon as the temperature and other conditions were suitable to sustain it, or for all the conditions and appliances for a high grade of life to be furnished when life did appear. It is simply the perfection of the great universe plan which provides everything that the highest use and highest development of any of the parts calls for.

We may conclude, then, from the scientific point of view, that not only is a revelation, or personal direct communication of thoughts by God to men, not a violation of the uniformity of nature, but it is distinctly called for by that uniformity. We may expect it to be of the nature and degree suited to produce the best results, but subject to that condition there is no more reason to suppose it will be of the quiet and inconspicuous character of the divine guidance Christians believe they commonly receive now, than that it will be with the most evident and convincing objectivity of a "theophany" or an audible voice from the sky.

To produce the best results we may suppose that it will ordinarily be given in such a way as to interfere the least possible with the incentives to use our own mental powers for the search after truth. At the same time, since the main purpose in communi-

cating at all is to so reveal Himself in a position of fellowship as to produce in man a similar feeling of fellowship, the communications, at least sometimes, must be of such a nature that they are certainly known to be divine communications, and it would be specially appropriate if in those undoubted and fully accredited communications or revelations there were given to us definitely from God the knowledge that He would continuously in our common life be giving us the other kind of quiet, unperceived yet real revelations or acts of guidance. In other words, if we had prophets and apostles receiving in the fuller way the Word of God and the divine Christ bodying Him forth in human shape, and these giving us the promise that He will dwell in us by His Spirit, "guiding us into all truth," and that He will hear and answer when we pray to Him. Such a scheme would agree perfectly with what science would deem a suitable way for God to make revelations or communications to men. It would yield the minimum of interference with the spirit of research, and at the same time it would fully achieve the main object which science could admit as a suitable object for making communications, namely, to make possible a feeling of fellowship on the part of men towards God.

METHOD OF REVELATION

The next division in order is "The Method of Revelation." We have already discussed under "Definition of Revelation" somewhat in a theo-

retical way the different possible ways of making a revelation. We may here consider the matter more in a concrete form. There is a book, the Bible, that is considered to be a revelation from God, or at least to contain records of such revelations. We may take up the question of how those revelations are alleged to have been made or how the persons concerned are supposed to have received communications from God.

In making this inquiry we shall take the records as they stand, without attempting to determine the question of their truth and reliability. The result of this inquiry, however, will have an important bearing on that question of the truth of the records. For instance, if the way in which it is alleged that a direct communication from God was received is a way in which it is highly improbable that God would make a revelation, or if the fact which the person concerned thought was a revelation can be proved to have been something else arising from another cause, that will have great weight in determining whether or not a revelation was given, and incidentally whether the narrative itself is trustworthy. If on the other hand we find that the way in which the communication is alleged to have been made is just the way that, according to our latest knowledge, it is most probable such a communication would be made if it were to be made, that, too, will have great influence upon our estimate of the reliability of the record.

We may call attention again to a caution already

referred to. The fact that a given phenomenon could be produced or accounted for in some other way than that proposed by our theory does not necessarily prove that it was produced in that way or prove that it was not produced in the way proposed by our theory. For instance, a doctor sees certain skin eruptions on a patient. He knows that exactly the same appearing eruptions could be produced by heat or the chafing of the clothing. But he may not therefore conclude that it certainly is not a case of measles, but is certainly caused by simple heat or friction. True, he would not diagnose it as measles from that only without other reasons, but seeing that only he might say it was possible or even probable that the person had the measles, if there was considerable likelihood of that person contracting that disease at that time. Other additional evidence might fully establish the fact that it was a case of measles.

Just so, when we read the record of some one receiving what he has supposed to be a revelation from God, even supposing all the signs or experiences detailed in the record are known to have been at times experienced by persons through other causes without a revelation from God, that does not necessarily prove that in this case this person was not really receiving a revelation from God just as he supposed he was. True, we cannot be convinced that it certainly was a revelation, without other evidence, but the fact that all the signs recorded might have been produced by other causes does not prove

that they were not produced by this cause, namely, God giving a revelation.

For instance: A certain person has a vision and seems to see God or an angel and hear words from them. There was a time when a vision was supposed to necessarily be a divine communication or at least a communication from some superhuman spirit. The very fact of having a vision was to the people of that time entirely sufficient to make them believe a superhuman revelation was being made, for they did not suppose a vision could be experienced in any other way, and it seemed to the person experiencing it to be a superhuman revelation. We now know that the seeing of visions is a common pathological condition resulting from certain mental conditions without any external objective presentation. The mere fact, therefore, that a person has a vision and seems to see God or an angel speaking to him, is not now sufficient proof that God is specially speaking to him, since all that we know he is conscious of experiencing has been experienced by others from merely subjective or mental conditions.

At the same time, that is not sufficient proof that he certainly is not receiving a revelation, or God is certainly not speaking to him, and there certainly is not any objective cause or agency present. In case it were otherwise known that it was probable that God would speak to this man and that *this was a probable way of His speaking to him if He did speak*, there might still be a possibility or even a probability that it was a case of His speaking. It would re-

main then for other evidence,—the internal evidence of the thing revealed, or other evidence of some kind,—to fully determine whether in this particular case God were really speaking or whether the person was mistaken and it was all subjective and pathological.

What science says, then, is that the case is not proven *prima facie* to be a case of God revealing. Just as long as there is a plausible possibility of accounting for all the facts on any other hypothesis or by any other cause it declares that it is not proven by the fact itself to be by God's special revelation. In addition to this science may declare whether, if a revelation from God were to be made, it would be probably made in that way or not. These two things science would authoritatively declare, but aside from that it would leave the question freely open to be determined by the appropriate evidence whether in the specific case there were an actual personal revelation or communication from God or not.

When we take up the book that is commonly considered to be a revelation or to contain revelations from God, we find that the revelations it purports to contain were given in three or four ways. We may divide them into four classes. (1) Theophanies or the objective appearing of supernatural beings. (2) Dreams and visions. (3) Inspiration, and (4) The incarnate word of God, Jesus Christ. These are the main ways in which it is claimed that God has communicated personally with men.

We may reserve the consideration of the last of

these for a special section on the subject of Christ and His work. As to the first, the so-called theophanies, the question is almost wholly a matter of the amount of historical evidence. Science has nothing particular to say in the matter, except perhaps to say that if the object desired was, in the infantile period of religion, when first impressions were being formed, to impress upon religious man that the being whom he was to worship as God was one capable of personal fellowship, the means best adapted to produce that result would be some kind of a theophany, or God appearing through and in a visible shape like the form of a man. That is usually considered one of the great purposes of God becoming man in Christ Jesus, and the same reasons would apply equally to His temporarily exhibiting Himself through the form of a man in the infant period of religious thought.

It is as to the second and third divisions that science has something very definite to say. They touch a field in which science has made specially interesting discoveries and studies just in the past few decades. As to inspiration, it is a matter whose evidence must be largely internal, from the character of the deliverances, or from some anterior promise or expectancy. In the case of the dream or vision or ecstasy, the evidence has formerly been considered to lie in the event itself. We may best, perhaps, consider the latter—the dream, vision or ecstasy—first, though in the end it may be found that the same principles underlie them all.

A considerable portion of the writings in the Old Testament portion of the Bible consist of exhortations by persons called "prophets," who claim to have been directed by God to speak as they did, and to have received their messages directly revealed to them by God. Not only so, but from the time of Samuel, and possibly earlier, the history speaks of an order of prophets and special communities of prophets. These prophets seem to have been religious teachers claiming to get their messages directly from God. It is not recorded in most cases just how they received their messages, but it is evident that in many cases it was by visions. In some cases the seeing of such visions is distinctly recorded, as in Isaiah vi., Ezekiel i., viii., Zechariah ii., v., vi., etc. The whole message of a book is often called a "vision" as in Isaiah i. 1, Obadiah i., Nahum i. 1, etc. In Zechariah i. 8, iv. 1, etc., the communication seems to have come at night in the form of a night vision or dream. Baalam the prophet of Pethor seems to have received his messages at night in the form of dreams (Numbers xxii. 8, 19). Paul in New Testament history is recorded to have frequently received revelations at night by night visions or dreams. Such an estimation of the divine origin of some dreams was very common, and the prophet Joel puts "dreams" along with "visions" as the recognized way of receiving revelations from God (Joel ii. 28, quoted Acts ii. 17).

From such passages as 1 Samuel xix. 23, 24 we learn that a state of ecstasy or trance was one of

the recognized forms of prophetic experience. In 2 Kings iii. 15 it seems to have been in a trance or other special state induced by the playing of music that the prophet Elisha received his revelation. These three phenomena then, the vision, dreams, and the state of trance or ecstasy, seem to have been common conditions in which men believed they received communications from God. There are very many cases, it is true, where there is no record of the person being in such a state, and it is quite possible that in many cases there was no such experience but the person was in his common, normal, waking condition when he believed he was receiving a communication. What is commonly called "inspiration" is conceived to be of this latter nature, namely, God specially directing and giving power or information to the mind working in the normal, natural way. As was said, however, we will pass over these for the present, and consider the more special conditions of visions, dreams, trance, ecstasy, etc.

In the first place, we may say, with regard to all these, that the mere fact of these phenomena, and of thoughts being conceived under the influence of these states, is no necessary indication that the thoughts have any divine origin, or any other origin than the mind of the person himself so affected. In all these states the person affected seems to see or perceive something objective, or to be conscious of another personality using his organs and acting through them, but it is now known that that is no conclusive proof that there really is anything objec-

tive or any other personality present. He may seem to be just as definitely and absolutely conscious of the presence and activity of the other person as he is of his own body and mind, and yet it is now recognized that that may all be produced subjectively in his own mind without the actual existence of any other person or object at all except the working of his own mind. All these effects can be produced, and are frequently produced, either by disease or at will in the psychologist's experimental laboratory.

Of course, as to dreams it has always been recognized by the most primitive science that dreams are natural phenomena and the fact of a dream does not necessarily carry with it any probability of superhuman communications. But what is true of dreams is now known to be true of all these other experiences,—of visions, ecstasies, trances, the seeming presence of another person acting through one's self, and the like. They are all known to be capable of being produced by pathological causes or by the laboratory experiments of the psychologist. It has doubtless seemed strange to many people that dreams should be given a place along with visions and trances in the Bible, as a mode of divine communication. But we now know there is no incongruity in bracketing them all together, as they all belong to the same grade of psychic facts. This truth will have weight on both sides of the question, as we shall see later.

In the second place, we find that all these same experiences of dreams, visions, trances and the like,

are found in connection with other religions as proof of divine revelations given there. Indeed, they are found outside of religion entirely, in the interest of all kinds of deception and trickery. The early Greek oracles, the medicine-men of uncivilized tribes, the witches and wizards of all ages and all the numerous class of wonder-workers of many countries and times, have made full use of all these experiences to gain the credulity of their followers, and in most cases have themselves believed in the divine or supernatural character of what they experienced. In this respect it will be a great relief to the Christian faith to have it proved that these things are not necessarily anything more than the special working of the human mind itself.

EXPERIMENTAL PSYCHOLOGY

Experimental psychology is one of the latest undertaken branches of research. Though yet in its infancy it has already made some of the most wonderful discoveries. There are some that predict that it is to be the great field of research and of scientific progress in the future, and that by its discoveries and developments it will work as many marvellous changes in human life and industry as have been wrought by steam and electricity, and the discoveries of physical science. Science, of course, cannot build upon mere predictions and imaginations, however likely or logical they may be; but the results already accomplished, though incomplete in many respects, have enough in them that is solid and fully

established to change in many fundamental respects our outlook on many phases of the problem of the mind's activity and possibilities.

Thirty years ago the whole subject of "hypnotism" or "mesmerism," as it was sometimes called, was still looked askance at by very many scientists, as being, if not wholly a piece of charlatanry at least so much used in that connection and so mixed up with fraud and deception as to be unworthy of serious consideration. It was a truer conception that said that nothing is too obscure or too suspicious to receive the most thorough and careful examination by science. Indeed the more fraud and malpractice are associated with its use the more imperative the need that science should take it in hand and subject it to the most thorough examination. This has been done and the results have more than fully justified this decision. For it was found that this something which charlatans had long been allowed to monopolize and exploit for their fraudulent purposes was really one of the most important means of analyzing the natural powers of the human mind.

Hypnotism is now known to be not a magnetic control of one mind by another, but merely a method of analysis of what is in the mind itself, by inhibiting or repressing certain activities so that certain others may have free or exaggerated control, something as chemical analysis dissolves out all the other constituents of a compound so that one only may be isolated and left, or the prism separates off from a

given spot all the other constituents of light so that the red or blue may appear there alone. It has been found a very powerful and fruitful agency in this new study of the mind. For one thing, it has revealed a great field of latent energies and possibilities in the mind, before hardly suspected, and which we now commonly speak of under some such term as "the subconscious." The brilliancy of the results it has achieved has done much to stimulate similar psychological research in a number of fields and by a variety of methods.

One of the important results of these studies has been to prove the identity or close resemblance of many pathological or spontaneously occurring abnormal conditions with mental states producible experimentally by hypnotism or other means. Among these we may mention hallucinations, apparitions, many of the delusions of insane people, the seeming doubling of personality at times seen in perfectly sane and normal people as well as in the insane, visions, trances, ecstasies and a number of other experiences. In these states there is often, to the person concerned, every appearance of something objective being perceived by him, and he is thoroughly convinced that such is the case, but yet, as easily shown by experiments, these experiences can all be produced subjectively with nothing objective present to be seen, produced by the person's own mind under the stimulus of some kind of suggestion either from some other person or from itself. Many of these experiments are too familiar to need any

special notice, but a brief discussion of the subject is given in the appendices at the close of the volume.

We might merely notice in passing that while the actual appearances are subjective effects, apparently produced by the person's own mind, yet the suggestions that produce them, or something that gives rise to them, is often something that comes from another person. Indeed in so imperfectly understood a phenomenon we cannot say positively that there is never something objective present and perceived by the mind. Some fairly well attested cases, in the form in which they are reported, seem very much to suggest something of the kind. In any case another person besides the one who sees the vision or has the subconscious experience, is often concerned in the case as the cause of his having the experience.

But the first significant fact, which is well recognized now, is that all these various kinds of experience can be brought about at will by purely human minds working with the natural powers with which they are endowed and in methods which are all perfectly consonant with the character of the human mind. A person, for instance, under the influence of hypnotism may be made to see persons or things which do not exist, to hear voices which do not exist, and be as positively sure that he sees and hears them as we are in the ordinary use of our senses. He may also be made to have all the experiences of vision, trance and ecstasy. And yet it is all merely the activity of his own mind, with nothing more than mental suggestions from another person.

Here we have then all the essential phenomena recorded as the states in which men received alleged revelation by vision, ecstasy and the like. They are all produced in the mind in that state, or series of allied states, to which has been given the name, "the subconscious." As these phenomena can be produced in the psychological laboratory at will, the mere occurrence of such phenomena in any individual is no indication that he is receiving a communication from God or any communication from any outside source at all.

Thus far all scientific critics would agree. This principle seems to have been recognized in the prophetic system of the Bible itself, as the test prescribed for knowing whether any message is from God or not is not drawn from the phenomena of its reception but from other legitimate evidence. (See Deut. xviii. 20-23; xiii. 1-3, etc.)

There is, however, another range of psychic phenomena even more closely related to our problem than those which we have just considered, phenomena, too, which are classified in the same general series as these others, under the name of "the subconscious." By various proofs they are known to be best produced in a state of mind related to, or identical with, that which is the basis of all the other states catalogued under that name. Various names are given to the phenomena, as "clairvoyance," "telepathy," "mind-reading" and the like. (See a fuller discussion in Appendix B.)

The difficulty in investigating these phenomena is

greatly increased from two sources. In the first place the great majority of cases which claim to be special phenomena of this character are proved to be entirely fraudulent, and merely clever tricks. So great has been the proportion of cases whose fraudulence has been proved that scientific men, until very recently, have contented themselves with the theory that it was all fraud, and unworthy of serious investigation. Happily, however, more recent investigators have taken up the subject in a serious manner, and by means of the most thorough and searching tests have been able to sift out from the mass of fraud a residuum of true psychic phenomena of a remarkable character, and whose genuineness is as thoroughly established as any scientific data can be.

As to this residuum of fully attested psychic phenomena, opinions differ in assigning its cause and nature. There are some men of high standing who are disposed to consider that at least in some of these phenomena there are outside disembodied spirits communicating with the spirit of the "percipient" or person exhibiting the phenomena. Other observers of the same phenomena are not prepared to concede that there is sufficient proof of communications from an outside spirit, but believe the knowledge displayed by the "percipient" and which he seems to get from some outside spirit is really obtained by his own mind or spirit from the minds of living persons, but without the means of speech or any other physical act, since all such physical

communication has been completely excluded by the precautions taken in the tests.

While there is thus this difference of opinion in the interpretation of these peculiar psychic phenomena we cannot feel that they are yet fully understood, but we must notice one thing, that in one point there is agreement among the observers, namely, that there is information gained by the "percipient" which he did not and could not obtain by any process of physical communication. In some way he has gained that information directly and without material and physical means from the spirit or mind of some other person, either living or dead. The only question in dispute is whether it is possible for the spirits of persons who are dead to be present and make such communications. If that were conceded there would be no more difficulty in supposing the person received his communications from such a disembodied spirit than that he received it from the spirit or mind of a living person, for in both cases the information would be conveyed directly from spirit to spirit without the means of physical communication, since that was carefully and fully excluded, and there is no reason to suppose it would be any more easy for that kind of communication to be made by a spirit in a living body than by a spirit detached and not in a human body, only supposing there were such spirits detached and not in human bodies but within reach of communication.

There would not be room here to go into a full discussion of this subject of telepathy or direct

thought transference. There are quite a number of reliable recent works which give numerous well attested cases of telepathy and other proofs bearing on the subject, some of which I have referred to in Appendix B. A very large number of such cases, in the aggregate, have been fully examined and tested by the "Society for Psychical Research" and other bodies, and, what would have more weight perhaps with scientific men, a large number of technical experiments and tests have been performed to determine specifically the possibilities of the mind in this respect. The result is, that however it may be yet with the general public, in the minds of those who have had most to do with studying these facts, there is no longer any doubt that thoughts are thus communicated from mind to mind without any physical means.

THE "SUBCONSCIOUS" MIND THE INSTRUMENT OF DIRECT THOUGHT TRANSFERENCE

One special fact must be noted with regard to these cases of telepathy or direct thought transference. It has always been noted by experimenters that the most satisfactory results are obtained from entranced percipients, that is to say, when the person is in that secondary state when the so-called "subconscious" is dominant. Practically all "mediums" give their manifestations in that condition, and the principle is found to hold good in experiments in "mind reading." Indeed in all cases it is believed to be the "subconscious" mind that

receives the impressions. The state in which the impressions are best received is the same state that is produced by hypnotism. It is now recognized that the condition of the mind in trance, ecstasy, visions and the like, is of the same nature. Some claim that ordinary dreams in sleep must be classed as of the same character. At least it is an analogous state.

Now we have seen that in those cases where prophets and others are reputed to have received communications from God they were just in that state of trance, ecstasy or vision, where the "sub-conscious" mind is dominant. They were just in that state in which our latest research declares that it is most probable that direct thought transference without physical means might be experienced. In the best authenticated cases where men have been fully tested and judged to be receiving direct communications without physical process from other minds to-day, their minds are in practically the same kind of secondary or abnormal state in which the minds of these ancient prophets were when they were reputed to be receiving communications in the same way from God's mind. The way these prophets are reputed to have received direct communications from the great divine mind is precisely the way our latest scientific research has demonstrated is the way in which such communications would most probably be received if given, for it is the way in which such direct communications are made from the mind of one man to the mind of another now. Instead of throwing suspicion on those

experiences, the fact of their coming in the form of trance or vision, as far as it has any evidential value, is entirely in favour of their genuineness, as that is precisely the form in which, if a revelation were to be made, it would most probably come. The "sub-conscious" is, so to speak, *the organ for direct thought transference*, just as the optic and auditory nerves are the organs for receiving thoughts transferred by physical processes.

We have already mentioned the conviction of many of the most competent investigators of the subject that it is possible for a mind to get information from another mind or spirit directly, without the instrumentality of any physical process. The chief difference of opinion in this regard among them is only over the question whether it is possible or probable that a mind or spirit detached from a body can be present to be the mind from which the information is gained, in the cases under observation. But if it is a question of receiving information from God there can be no doubt in that respect. If, as we are now assuming, God exists as a great spirit, with intelligence, thoughts and all the other attributes of the human mind, and is present everywhere, there can be no more doubt of the possibility of receiving information in this way from His mind than of receiving it from the minds of finite men, as the investigators concede is done.

We have seen, then, that the state of trance, vision or ecstasy is not necessarily in itself a proof of divine communication, since it is merely a mental

condition that is easily produced by natural causes. But we have also seen that those are just the states in which, in present day instances, persons receive direct, immediate communications from other minds, and if God were to make direct communications to the minds of men that is the state in which it would be most natural to expect that they would receive them. Moreover, since God is a spirit like the minds of men, and is present and available as a source from which communications or information might be received in this way, there is no more improbability of prophets receiving information from the mind of God in that way than of mediums and experimenters receiving information from the minds of present or absent men in the same way, a fact that is now practically conceded by competent investigators in this field of research.

CLAIM OF THE BIBLE TO BE GOD'S REVELATION

Thus we see that, while of course science does not bring any positive proof that in any instance a revelation from God has been received, yet it does entirely remove all improbability of such a revelation being received in just the way it is alleged to have been received, and leaves the question entirely unprejudiced to be determined by historical and other methods of criticism, just as any other fact is determined. And it is very significant to note in this connection that the prophets themselves, as we have already noted, based their claim to be believed as giving the mind of God distinctly upon

the intrinsic and internal character of the messages which they gave, and the other natural and collateral evidence. We are warranted, therefore, in taking up the question whether a certain piece of information, teaching or command came from God, with no more adverse prejudice, and in just the same way as if we were inquiring whether it came from Paul, or David, or Luther, or Moody.

It is not in place here, of course, to discuss such questions which belong to the domain of historical and philosophical criticism, but we may just suggest that in the course of the propagation and development of what the world now recognizes to be the highest form of the worship of the creator God, a cult which lays the greatest stress upon both the possibility and the desirability of personal fellowship with God, and emphatically claims to be based upon such personal communications from God, a cult which has won its way upward to purity of form and outward to the very widest dissemination, all against the most tremendous odds and opposition; to suppose that in all that process there has never been any personal communication from that divine Spirit received by the mind of any man, when, as we have just seen, science declares that it would be perfectly easy and natural for such communications to be received, and the evolutionary situation itself calls for it, would be an anomaly so strange that science should demand the most convincing reasons and proof before it could accept it.

Again if we concede that such communica-

tions have been made by God and received by men at any time, then taking those things in the Bible which purport to be such revelations, and comparing them with all others in other nations, times or places which also claim to be revelations from God, the question is whether these, by their intrinsic character and other evidence, would still, in view of the similar claims put forth by others, be judged high enough in rank to be included in the selection that should be adjudged true revelations from God. Do these show as much sign of being true revelations from God as any other teachings that are found elsewhere? To this question I think the answer must be unquestionably in the affirmative. If any revelation has at any time been received from God it is more probable that this is part of that revelation than any other known teaching that assumes to be so. That some revelation should be received we have seen is most imperatively probable. Thus indirectly we do find some most important reasons for believing that these communications which prophets and holy men received in the state in which science has proved that communications are received direct from the spirit of another, were really, as they claimed to be, teachings received from the mind of God, or revelations.

INSPIRATION

There remains to be considered another way in which it is claimed that God has communicated His thoughts to men, namely, what is commonly referred

to under the term "inspiration." The communication or direction is received by the person in his normal state, without any trance, ecstasy or other special experience. It seems probable also even in the case of the prophets, that some of the messages which they gave as received from God were not received by vision, dream or any such special way, but they were in the use of all their faculties when they believed they were receiving the communication.

This, however, is no obstacle to believing that there was an actual communication from God, provided there is otherwise proof that a communication has been given. We have shown above that the dream, vision, trance or ecstasy is a very suitable state for a communication to be received from God if such a communication is to be given. But it is so, not because there is anything supernatural about these states, but merely because they are states in which the "subconscious" is in control, and the "subconscious" seems to be the instrument or faculty by which telepathic communications are received, or by which knowledge is received without the medium of physical processes.

But the "subconscious" is not an outside something that comes into the mind at certain times. It is an integral part of the mind itself, and always present even in normal activity. Hypnotism does not produce it but merely holds in check something that ordinarily restrains it, and thus lets it emerge and have free activity. The same is true of whatever

causes the other states where the "subconscious" is in the ascendancy. It is merely giving free rein to something that is always present though held in restraint in normal life.

Moreover, experiments have proved by a variety of methods that this "subconscious mind," though comparatively quiescent, is not only existent but is often to some extent active in many of our ordinary thought processes. In particular this has been shown in some of the very experiments used to prove this fact of telepathy. (See Appendix B.) In that class of experiments where a person is made to guess an object or number upon which other persons are concentrating their minds, though the proportion of correct guesses is much greater when the "percipient" or guesser is hypnotized, yet even in his normal condition the number of correct guesses will be found very much larger than the law of averages would indicate to be probable from chance alone, thus indicating that even in the normal state his mind had been in some degree influenced by the minds of the persons who knew the thing that he was guessing.

If then telepathic perception is experienced in some minor degree by all persons even in a normal state, and the "subconscious" which is the instrument of such telepathic receptivity is present and active to some extent even in our normal thinking, there can be no impediment to believing that the great divine Spirit might make communications to men while comparatively in their normal condition, or might

suggest ideas or direct and make more efficient the thought processes and reasoning powers of a man studying and reasoning in his normal condition. To do so is to do no more than those who have made the closest study of this phase of experimental psychology believe one human mind can do directly to another.

If this is true, and God does exert such influence upon the minds of men, it will be seen that the implications are exceeding wide and far-reaching. In the first place, what is commonly called "inspiration" becomes perfectly plausible and clearly definable. It is claimed for the writers of the various parts of the Bible that they were inspired by God. And yet it is plain in all the writings that the writer's own mental processes were as much used in the collection of the facts, the reasoning and the literary composition as though he had no "inspiration." There is the unmistakable imprint of a different personality on each different writing. This would be expected to be true if his work was overseen and helped by some human friend, and the relation of God in "inspiration" is essentially of the same character, only that the human friend would give his help and direction by an audible voice and God by the process called "telepathy" or something similar.

That God gives His communications only or chiefly to the subconscious mind is only because that is the instrument adapted to receive thoughts transferred without physical agency. Whether God could or could not give thought communications that

could be perceived by the ordinary conscious mind we need not stop to inquire. It is sufficient that the "subconscious" mind is the part of our mental organism that is adapted to receive direct thought communications. The ear or the auditory system is the part of our organism that is adapted to receive communications by means of speech or sound. It has been found in the case of certain persons entirely without the sense of hearing, that the impact of sound waves on other parts of the body produces sensations that can be perceived and differentiated by the common sensory nerve system. It would be possible therefore for speech, or the communication of thoughts by sound vibrations, to be addressed to and perceived by some other part of our mental organism apart from the auditory system, and yet if God wished to communicate His thoughts by means of speech we would expect Him to address Himself to, and be perceived by, the ear and auditory system and not by that other possible means, not because the other is not possible, but because the auditory system is the instrument intended for and adapted to the perceiving of speech. Just so the "subconscious" is the part of the mental organism adapted to, and adjusted for the perceiving of directly communicated thought communications, and so it is the part of our mental organism that perceives when God makes a direct mental communication.

As has been said above, however, this "subconscious" is present and active all the time, only ordinarily we are not distinctly conscious of its con-

tents or its activity. It may rise into distinct consciousness under hypnotism, or in the trance and other allied states, it may be partially in control while the normal faculties are also conscious and active, in a state of semi-hypnotism, or again it may be active and influencing our normal thought processes while we are entirely unconscious of its activity.

If then God's communications are made to and perceived by the "subconscious" faculty, they may be received and perceived in a vision, trance, ecstasy or some similar fully hypnotic condition, or they may be received and perceived by the person while still in the use of all his ordinary faculties but in a sort of semi-hypnotic condition. This is the state in which it is supposed that the prophets sometimes received their messages. In the third place, they may be received and perceived by the "subconscious" and the "subconscious" transmit them to the other departments of the mind or use them in directing the normal thought processes, without the normal faculties being at all disturbed from their ordinary operations and consciousness. This would seem to be the definition of what is commonly spoken of under the term "inspiration."

REVIVALS

There is still another implication more closely allied to our present experiences and practices. One of the experiences of religious activity in the present as in the past is, at certain times, a contagion of feeling and resolve by which large num-

bers of persons believe themselves to be converted or lifted into some higher plane of life, and which are usually called "revivals." These revivals are sometimes accompanied by special ecstatic, trance, and other similar experiences. Formerly these special ecstatic phenomena were supposed to be necessarily divine manifestations, and so proof that the revival was God's work. Recent psychologists, however, have shown conclusively that these special manifestations are not in themselves any evidence of divine special working, since they are all merely manifestations of subconscious control, the same as is seen in ordinary hypnotic states. As many excesses are often performed by persons in these ecstatic states, hurtful alike to their own persons and to the cause of religion, it is a relief to know that this feature can no longer claim to have the sanction of being a divine manifestation.

But many have gone farther, and drawn the inference that not only all such ecstatic experiences, but indeed all religious contagion, since it is not, as supposed, a special divine manifestation, is a false pretense and a delusion and ought to be only discouraged and avoided in religious meetings. But this is an entirely wrong inference. The very discovery that takes these experiences out of the realm of the supernatural gives them a place in the realm of the natural, as an integral part of our natural mental apparatus. There is nothing necessarily false about them because they are not what people formerly supposed them to be, any more than there is

anything necessarily false about the manifestations of experimental hypnotism because the same processes were formerly exploited by charlatans under the titles of magic, or animal magnetism.

The only legitimate question with regard to these things is whether or not they are useful mental states and processes,—whether they produce results helpful to the religious life or not.

With regard to the more violent forms, as ecstasy, catalepsy and the like it is for the physician to say whether the shock to the mental and physical organism may not more than overbalance any good results experienced. But for the cases of simple contagion of feeling and impulse, which are the more common and ordinary features of all revival occasions, the main question is,—What is the relation of those states to the receptivity of the mind? are they useful in helping to persuade the persons concerned and in leading them to the changed life that the preacher is urging upon them? and on that question all the facts which we have been just considering have an important bearing.

It is generally recognized that this contagion of feeling and impulse is caused by, and consists in, a measure of "subconscious" control. We can easily see then just what is the value and the potency of this state. The most characteristic feature of the "subconscious" is its extreme suggestibility. The hypnotized subject believes and does anything whatever that is suggested to him. He will also afterwards in his normal state carry out the sugges-

tions made to him while hypnotized, as in so-called "post-hypnotic suggestion." Moreover, as we have seen, the "subconscious" constantly exerts influence upon the normal self and passes on to it to some extent the impressions or states which it receives, and so its activity affects all the ordinary life of the individual. Especially would we expect this to be so, if the suggestion were accepted by the "subconscious" in a state when the normal powers were also consciously active and accepted the suggestion also at the same time.

This seems to be the case in the kind of contagion experienced in revivals. It seems to be a sort of semi-hypnosis combining the suggestibility of the "subconscious" and the permanency of normal belief, and with it all that deep influence upon the fundamental functions of life which is characteristic of subconscious suggestions. This state into which the hearers are thrown by the contagion is therefore a highly suggestible state in which they tend to believe all that the speaker declares and to do and resolve all that he advises. If the aim of the preacher is to induce men to adopt certain right and religious beliefs and practices, we could hardly conceive of a more effective aid to attaining that end than just this state of contagion. Moreover the effects of post-hypnotic suggestion come in to keep these new beliefs and practices in active operation long enough to produce permanent habits of the life.

As to the ethical aspect of such a method of persuading men, if any one should be disposed to object

on that score, they should remember that it is not by any means only here that suggestion is used as a means of producing belief and action. It would not be too much to say that in a large proportion of the things that we believe suggestion had a part in the influences that brought us to believe in them, as truly as pure reason, and in many cases it has been pure suggestion alone, unconscious but none the less truly so, that has caused our belief. As to actions, it would be safe to say that suggestion is by far the most potent of all the influences that lead men to bad conduct. It is rather straining a point then to object because suggestion is used as a means to lead people to beliefs that are conceded to be salutary and conduct that is unquestionably good. For this suggestibility is not an alien thing or a magic spell, but an integral part of our mental constitution, just as legitimate a part of our mental constitution as our memory, our reason or our artistic tastes. There is no reason therefore why it is not just as legitimate to use it to influence men, as to use their artistic tastes or even their reason. A person may be thrown into brain-fever by stimulating his reasoning powers excessively, and there are bad effects that may follow an excessive or wrong stimulating of this mental state. But in neither case does that make it wrong to use that process to influence men.

GOD'S SPIRIT IN REVIVALS

But this is not all. If this state of contagion induced in revivals is a functioning of the "subcon-

scious," we must also remember that it is the "subconscious" that is susceptible to communications by telepathy. If God's Spirit makes direct thought communications to the minds of men, the men in that state of contagion would be in precisely the state to receive and perceive His communications.

It is venturesome to even make conjectures on a subject of such transcendent character, but if we believe the Spirit or mind of God is always present with us, and here we have a person earnestly desiring to know the mind of God and partially in that subconscious condition in which it is claimed that a mind can directly read another mind, is it not possible that under the laws and teaching of the most modern science we may still find reason to believe there is a special meeting with God in the revival experience? It may be in a different way and for different reasons, but is it not possible that we may be after all able just as firmly as our fathers to believe that the revival and conversion experience is a special meeting of the soul with God? that the subconscious mind of the "inquirer" really receives directly from God some communication or influence that profoundly affects all his life?

What is true of the revival and conversion experience may be also true of the experiences of the after life. If God is not a distant being, millions of miles away from us in heaven, but a great spirit or mind ever close to us and present with us, and if the "subconsciousness" with its telepathic powers is active in our normal state as well as in the special

trance or secondary conditions, who can say that to those that desire and seek them there may not be communications and directive influences constantly received from the mind of God direct? The possibilities opened up by the latest discoveries of science as to the powers of the mind are very great, at least as great in this respect as the faith of the average Christian is usually able to accept.

The investigations of science in this field of experimental psychology are so recent and as yet so incomplete that one hesitates to speculate as to the future. It is easy to give rein to the imagination and look for as revolutionary discoveries in this line in the present century as were produced in the line of physical research in the last. In the above discussions, however, we have entirely restrained imagination and only built upon such of the already established facts as are generally accepted by competent investigators. But as we have seen, even this modest selection of already fully assured facts is quite sufficient to prove that there is nothing antagonistic to sound scientific principles in any of the claims of the Bible as to any of its contents being a revelation from God. On the contrary we have seen that God, being such a being as the previous discussions have indicated Him to be, the evolution hypothesis itself would positively call for personal communications from Him to intelligent man, and if such communications were to be made the most natural and probable forms in which we might expect them to be made would be just the forms in which

the Bible claims that they were made. We see therefore that as far as it has bearing on the questions at all the results of the latest investigations and discoveries of psychical science seem rather to corroborate than to antagonize all the teachings of Christianity, with regard to the revelations made to prophets, the inspiration of the Bible, the special work of God's Spirit in revival experiences and God's constant guidance and teaching for those who believe and trust in Him. All such experiences fit in exactly with what the latest investigations are indicating to be the real nature and powers of the human mind.

III

THE BIBLE AS A REVELATION

UNQUESTIONABLY when considering the forms of revelation, the most important form of all must be conceded to be the personal revelation of God in and through the person of Jesus Christ. It will be more convenient, however, to postpone that question and all other questions connected with the character and work of Jesus to a later place where they can all be considered as a connected whole. We may then here pass on to the consideration of the next division,—“The Contents of Revelation.”

Without attempting to answer the question whether God may not have also made revelations to other persons, as for instance Zoroaster, Shaka, Confucius and other great religious leaders, we will confine our attention here to the one revelation with which the Christian religion is most intimately related,—the revelation which is given in the Christian Bible,—the Old and New Testament.

We have already defined that by “revelation” we mean the communication of thoughts as thoughts personally from God to men. As was said above, however, we may also to some extent include under the term truths conveyed by significant acts provided those acts and the lessons they convey are

specifically held up to view or attention called to them by some direct message or indication from God.

NATURE OF THE CONTENTS OF THE BIBLE

If we attempt to classify this material in the Bible that is commonly called a revelation, we might divide it into three or four classes.

First, we may put the prophecies, which are claimed to be given by the direct command and instruction of God.

Second, we might place various didactic writings, such as Proverbs, Ecclesiastes, Job and the like, with the New Testament epistles, which are not like the prophecies supposed to be given by direct command and instruction of God, but are claimed to have had His assistance and indorsement in such a degree that they go out with His authority as His teaching. The various moral and ritual laws contained in the Pentateuch may be assigned to this class or to the previous one according to the view that is taken of their genesis and authorship.

Third, we might place the devotional compositions in the book of Psalms and elsewhere, which are chiefly of the nature of prayers, praises or other addresses made to God, rather than communications from Him, but inasmuch as they are considered to have the stamp of divine approval they would so far forth be properly considered a revelation of His mind.

Fourth would be placed all the historical portion.

This is, for the most part, the record of events that occurred in the history of the nation and individuals in the land of Israel, just as human as those that occurred in the land of Greece, Germany or any other land, but yet on account of various considerations as to their nature, their selection and various interpretations that accompany them they are considered to be a revelation of the will and ways of working of God in concrete form, and as the writings are supposed to go forth at least with God's indorsement they would so far forth be properly counted a revelation from Him of His will and plans.

As to the first class, prophecy, two questions emerge. The first question, as to whether or to what extent there is real revelation there, has already been discussed in former sections. It is merely a question of fact, and science has no evidence to give, further than to show that if a revelation were to be made from a spiritual being to a man the way in which the prophets believed themselves to have received communications would be precisely the most natural and probable way for it to be made.

The second question is as to the object aimed at by these prophecies or the fundamental nature of their contents. There is a very popular misconception here. From the common colloquial use of the word the main intent of prophecy is misconceived to be the foretelling of future events. This is to entirely mistake the nature of prophecy. There may or may not be such an element in any given prophecy, but in any case it is merely incidental and

never the main purpose of the message. The main purpose of every prophecy is always ethical, to persuade men to some line of conduct, and references to future events, if made, just like references to past events, are introduced as showing God's will and purpose, and as an incitement to the acts the prophet is insisting on. It is not the purpose to write history before it occurs and give the incidents of future events before they happen, but merely to declare what God's present purpose for the future, in view of the present state of affairs, is. Moreover, it is always the tacit understanding that if that present state of affairs is changed there will be a corresponding change in God's purpose and in the future event when it happens. This is illustrated, for instance, in the prophecy of Jonah, and the principle is explicitly stated in Jeremiah xviii. 7-10. Prophecy, therefore, purports to be God through the prophet urging men to certain lines of right conduct. In that sense it is called revelation.

As to the second class, the merely didactic writings, the degree and the sense in which they will be considered a revelation from God will depend on the conception that is held of inspiration. The theory of inspiration that is held by perhaps the great majority of enlightened Christians to-day would consider that these writings were produced by their authors just as any other writings are, the author using his own knowledge and own reasoning powers and moral and religious instincts to formulate the things he wished to say, just as much as any other

writer would. This is also true in a large degree of what the prophets said also, and of all the rest of the Bible.

However, just as Christians to-day believe they receive help from God in understanding the truth, so and in a much greater degree these men were helped in their search after useful truth and guarded from error by God. In addition to this it is believed that God so superintended the selection of these writings, and sent them forth with His definite indorsement in such a way that the things taught may be accepted as His teaching and expressing His will.

It has to be borne in mind that much of this instruction was conditioned by the circumstances in which it was given. Many of the Mosaic regulations were merely national. Many of them were only appropriate to a people in the particular condition in which the Israelites were. The same is true of many of Paul's instructions and precepts. In other words they are teaching that expresses God's will for the people to which they were given, at the time and under the circumstances in which they were.

When we come to the next class, devotional compositions, much the same is true that was remarked about the previous class. They are the real composition of the authors by whom they were produced in every sense yet specially aided by God and sent out with the indorsement of God as fitting expressions of devotion, prayer and praise. Here again, also, we must remember that they were conditioned by the time and circumstances in which they were

produced. What would be a suitable frame of mind under certain circumstances would be very inappropriate under certain other circumstances. In addition to that we must recognize that there are different levels of virtue. There is "good" and "better," and both are commendable though still a long way short of "the best."

For instance, justice is a legitimate standard. No man can be condemned for wishing and seeking in lawful ways that those who have done wrong should be adequately punished for the wrong they have done. That is one legitimate level or standard of virtue. But there is another standard which, since Christian times, has been set up for men to seek to attain to, namely, to "Love your enemies." Desires, prayers and ascriptions to God growing out of the former state of mind would be legitimate and right. Desires and prayers after the latter standard would also be right and would be higher and nobler than the other. And for all we know there may be still a higher standard than either of these set some time in the future, inspiring still higher and nobler desires and prayers.

OBJECTIONS MADE TO SOME PARTS

The principal problem in regard to this class is in those prayers or hymns in the book of Psalms which seem to breathe a vindictive and intensely revengeful spirit. They pray for the severest punishment or total destruction to the enemies of the writer. Acts and treatment that we would consider exceed-

ingly cruel are prayed for. This is thought to be inconsistent with the will of God, and so precluding us from counting these compositions a part of God's revelation.

But it must be borne in mind that what is prayed for is merely a just and adequate punishment for wrongs committed. In perhaps the cruelest passage of all it is distinctly stated that the cruel treatment of the enemy prayed for is only exactly the treatment that enemy had actually inflicted on the writer and his friends (Ps. cxxxvii. 8, 9). It was people who had suffered such almost unthinkable cruelty and were liable to suffer such cruelty any day from enemies that were all around them and constantly harassing them, by whom these Psalms were written, and to whom they were originally given as vehicles of prayer and devotion.

On the other hand it must be noted that in most cases the writer asks for God to inflict the deserved evil upon his enemy rather than that he may be able to do it himself. Or if he prays that he may be successful and overthrow his adversary it is on the ground that his cause is just, and the adversary is not only doing injury to him but opposing and fighting against God. Now it is the most fundamental teaching of all morals that wrong-doing should be and will be adequately punished. It is an act of faith, when that wrong is against one's self, to look to God for its punishment rather than to plan revenge one's self. And it is an act of faith, when one is overwhelmed with enemies entirely too strong for

him to defend himself or inflict punishment, for a man to still retain his faith in the justice of God and retain his courage and equilibrium with the confidence that God will inflict the punishment that he cannot, or will some time enable him to inflict it.

We see, therefore, that even in these parts, the standard is a right and a just one, and one that implies a high development of certain phases of true godly character. Other phases of character are not developed to so high a plane, it is true, but a man or an act should be estimated by the good positively accomplished, not by the circumstance that some other person has accomplished something that he has not. If a man is a great scientist he should be esteemed for that, even if he is not also a great musician and a great statesman. A scholar who has shown great proficiency in his grammar school studies should be esteemed for that, even if he is densely ignorant of much that the university graduate knows. The man, who has advanced to the plane where he not only desires justice but looks entirely to God for the meting out of justice to those that have injured him, has made considerable advance towards the character that God desires him to have, even if he has not yet advanced to the plane where he can leave God to mete out the deserved punishment without asking for it and keep love in his heart towards the injurer. How many men, even of the most Christian faith to-day, have reached that plane?

To say that these compositions are a revelation of

the will of God, therefore, does not mean that God has therein set a standard of the perfect character. It does not even mean that God wishes all men to have the feelings and express the desires that are here expressed. Men who can do better than what is expressed in these compositions ought to do better. The time may come when the race will have so far advanced, and the conditions of society have become so improved that for all the injuries they are ever liable to have inflicted upon them men may be able to maintain the state of feelings called for in the higher standard. Needless to say that time is unfortunately still in the future.

What is meant by calling these compositions a revelation of God's will is that when the person under the extreme circumstances of cruel injustice and barbarous oppression was able thus to commit his case to God, and look to God for justice with confidence that God would mete out justice, God signified His approval and indorsement of what that man so did as worthy of commendation. To the men of that time, of similar oppressive circumstances and of a similar grade of development it would be a suitable standard to seek to attain to, one adapted to produce more practical results than a higher one could. To the men of all time too it might remain as a noble example of the highest level to which mere justice alone could attain.

We must remember, too, that these imprecatory parts are a comparatively very small proportion of this literature, which all is on a very high plane of

trust and loyalty to God and thankfulness for favours, with contrition for faults. The man even of to-day, whose feelings and desires would all average up to the general level of what is expressed in this body of literature would be on a very much higher plane than the majority of even Christian men are to-day.

We must remember again, as a most important consideration, that all God's purposes are practical, not merely theoretical,—to achieve results in uplifting men rather than to merely formulate a theoretical exhibit of abstract perfection. We could not imagine Him actually advising to do a wrong act, but we can understand His persuading men to seek to attain to a standard that is comparatively low and imperfect, when that standard is the highest there is any probability of their ever attaining to, and is immeasurably higher than their natural inclinations. We find this principle clearly confirmed by Christ Himself in the case of divorce (see Matt. xix. 8) where He says that Moses, impliedly with God's approval, allowed an evil practice to continue but under the greatest restrictions it was then feasible to put upon it. To tell a man that has just seen his wife and daughters debauched and his little infant snatched from his arms and its brains dashed out on the rocks,—to tell that man that he ought to do nothing but love and wish well to the fiends that did all these things would be merely breath wasted or worse. But to tell him that he can look to God to fully punish the men that have wronged him, and

for him to still continue his perfect trust and loyalty to God, is to tell him just the most appropriate and helpful thing possible at that time, and this is just what the most extreme of these imprecatory Psalms do.

HISTORICAL PART—GOD'S INDORSEMENT CONSTITUTES IT REVELATION

The fourth class consists of the historical portions. These, while merely the record of events that occurred in a certain nation or race, are called a revelation of God, on the ground, 1st, That the events are recorded in such a way as to specifically call attention to the working out of God's purposes in and through those events and His directing control over them. 2d, That the record is of an enterprise in which God in a special way revealed His will with regard to many things both by the events and in special dealings accompanying them. 3d, That the written record has God's indorsement to go forth as a competent statement of the nature of God's activity behind human phenomena and of His will with regard to various lines of conduct and of national polity.

In all the various classes of revelation above, we have given as one and perhaps the most important ground for considering them a revelation, the feature of God's indorsement for them to go forth as an expression of His will in the respects named. This of course is a question of fact to be determined by theological and historical criticism. If He has never given any such indorsement then all claims

based upon having such indorsement must be disallowed. But if He has given such indorsement to the finished product the method of its production, and all other matters would be of minor moment. Whatever its origin or the character of the men that wrote it, if it has such indorsement it is so far forth just as rightly to be considered God's revelation as if it had all been written with His finger miraculously upon tables of stone.

The Church believes that it has such indorsement and that God has intended and directed men to use it as giving His will in the ways and senses named above. There is not space here, nor is it appropriate to discuss that matter now or attempt to set forth the grounds of this belief. Among the secondary or circumstantial evidences are (1) the fact that the Christians of all ages have felt satisfied in considering it to have God's authority; (2) wherever it has been so accepted it has had enormous influence in uplifting and establishing the character; (3) in general it has had influence for good in the world immeasurably beyond any book of merely human authority, (4) and finally, in its selection from among contemporary literature there has always been noted in it such a marked superiority and difference as to put it necessarily in a different class from any other works of the age or ages in which it was written. These are only secondary or circumstantial reasons. There are many other direct and positive reasons alleged to show that if God has ever exerted any directive control upon the

religion of men He has certainly indicated that these writings are to be used as an authoritative statement of His will and a guide for life.

THE CREATION STORIES

Among the various questions that are raised with regard to this fourth class, or the historical writings of the Bible, we may take space to notice only one or two that seem to have some connection with the scientific point of view. The first is a question much more discussed a few decades ago than now, and concerns the opening chapters of the book of Genesis. These chapters seem to give an account of the beginnings of the world, of the human race and of human society. It used to be claimed that this account was contrary to what science has found out as to the nature of those origins. Later study, however, has shown that the supposed contradiction rested upon an arbitrary, though traditional interpretation of those chapters, and an erroneous conception of the findings of science in some respects.

In particular it was claimed that the conception of the human race being derived from a single pair, Adam and Eve, is inconsistent with the evolutionary origin of the human race in common with all other animals and forms of life. Exception was taken to the account of the creation of the world in the first chapter, to the origin and nature of sin in the second chapter and to the general picture of primitive life as being pure and innocent while science

points to a primitive state of the densest and lowest savagery.

In considering these questions we must first bear in mind a fact that was not formerly recognized but which late Hebrew scholars have pointed out, namely, that these opening chapters of Genesis are poetry. It would be utterly fallacious to interpret the words of a poem in the same way that we would a scientific report or historical criticism. We must take other poems, especially other Hebrew poems, and by comparing them together learn how we are to interpret what is written here. Take for instance the eighteenth, forty-sixth, sixtieth, eightieth, one hundred and fourteenth or any of a large number of the other Psalms and see how the Hebrew poets used language to express their thoughts. No one imagines that God is a huge monster blowing fire out of His mouth and smoke out of His nose as Psalm xviii. 8 seems to declare, nor does any one suppose that the writer intended to teach that He was such a being. And yet he was expressing a great truth and expressing it in a vivid, forcible way far more effective than a cold scientific statement would have been.

It is a popular mistake, on the other hand, to suppose that because a composition is a poem no value can be given to it as a narrative of facts,—it must necessarily be rated as merely a creation of fancy and imagination. There are poems built entirely out of imagination, as also there are prose works of the same character,—novels and romances.

But a poem may also be used as a form for relating actual occurrences, as was often done by the ancient bards and minstrels. Very often a poem gives in the main outline historical facts though the minuter details are fictitious, as for instance in Shakespeare's historical plays and in many epic poems. Sometimes again the motif or underlying thought of the poem is a great moral fact, though all the incidents are imaginary as in Milton's "Paradise Lost" or Dante's "Inferno." In all these the poem expresses great truths only in different ways. These prefatory poems might be of any one of these classes without being inconsistent with the character of the book as a revelation of God teaching great moral truths. It is the province of criticism to determine by internal and other evidence to which of these classes they belong.

When we examine the extant old Hebrew poetry we find in the Psalms instances of all three classes. Sometimes, as in the seventy-eighth Psalm, the poem is made up almost entirely of facts recorded elsewhere in prose history. Some of the Psalms belong to the second class where the general outline consists of historical facts though much freedom is exercised in expressing the minute details. In other Psalms, as the eighteenth, or in the seventh and eighth chapters of Proverbs great moral facts are expressed by fictitious or symbolic representations. We would have good precedent, therefore, for supposing that these prefatory poems might be any one of these three kinds. There would be no obstacle to

considering them close and accurate narratives of concrete facts, if their internal evidence points that way. On the other hand if the internal and other evidence proved them to be the figurative and symbolic representation of great moral truths that would be no disparagement of their truth or obstacle to including them in a divine book that contains many other poems of the same nature and form.

The first of these poems, in the first chapter of Genesis, has the creation for its subject. In this chapter, the old objection based upon a literal interpretation of the word "day" in conflict with the teachings of geology as to the age of the world, which was very acute half a century ago, when the study of geology was first becoming popular, has now subsided almost to a curious memory. On the other hand many are now impressed with the striking resemblance in the order of events as recorded in the poem and as taught by geological research. This is the more remarkable as it is not the order that would most naturally suggest itself, and is not the order found in any of the cosmogonies contained in the mythologies of so many of the other nations.

A conspicuous instance of this is the order which is given for the appearance of forms of life. The order is,—First, vegetation, second, marine forms and birds, and third, land animals, and last man. Of course, to see the correspondence we must consider that the picture in the poem refers to the introduction of that particular class of life forms in that order, not the appearance of all the forms that

eventually developed in that class, before any of the next class appeared. Really in all three classes there are new varieties if not even new species yet being developed, but the order in which these different classes of life first appeared was just as the poem gives it. A rather singular touch is the inclusion of marine animals and flying creatures in the same class, forms that most people naturally would suppose to be almost the farthest apart, but which the researches of geology have shown are really the most closely related.

It is not necessary to claim for these and other remarkable correspondences anything more than a very interesting coincidence, as the record is not intended, and does not purport to be a scientific description of the process of creation, but merely a very graphic presentation of God as the creator of all things. That is the one lesson that is sought to be taught by it, and other things are merely incidental. But this remarkable coincidence certainly does preclude that almost contemptuous criticism of the record that some people a generation ago were in the habit of making, from a wrong and arbitrary interpretation of the passages. A scientist, knowing all the facts that the latest researches have developed, if he wished to make a vivid and graphic picture of the theological conception of God as the creator could hardly do better than to follow precisely the lines and the imagery used here in this oldest of poems. In almost any other instance we would have no hesitation in affirming that a poet

must have had the scientific facts before him when he composed such imagery and arranged the order of the poem.

When we come to the next poem, beginning with the fourth verse of the second chapter, a number of criticisms are sometimes made. Objection is taken to the so-called "anthropomorphic" presentation of God. The conception of the human race as beginning with a single pair is said to be contrary to the teaching of evolution that one species evolves by gradual and imperceptible steps from some species just below it. Again it is claimed that the first beginnings of the human race were in the most brutal and abject savagery, and entirely different from the idyllic picture of innocence given in this passage. These and similar objections are sometimes urged even by persons who hold to the usefulness and even inspiration of these passages, as conveying vivid and valuable moral lessons.

We could indeed believe this to be a valuable moral lesson, worthy a place in an inspired religious book, if it were made up entirely of allegorical and figurative pictures of moral truths, and there were no historical facts of any kind forming even the basis of its incidents. There are other poems of that kind in the Bible that are accepted without hesitation, as for instance parts of the chapters of Proverbs referred to, and probably a number of other compositions. But a fair and just interpretation and examination will, I believe, show that none of these objections or criticisms are really valid

against it. There is no valid objection, at least on the scientific side, to considering the acts and events portrayed to be in part, or even in whole, historical facts.

ANTHROPOMORPHIC CONCEPTIONS OF GOD

In the first place,—as to the so-called “anthropomorphic” representation of God, both here and all through the Bible,—what higher kind of representation could we make of Him? It is well understood now, and doubtless was more or less understood from the beginning, that God really far transcends our highest conceptions of Him. But, as has been often pointed out, our highest conception is an anthropomorphic conception. The highest kind of acts that we know of or can form any conception of, are the rational, mental and volitional acts of men, or acts of that fundamental nature. The highest kind of being that we know of is an intellectual, free-willing man and the highest kind of being that we would be able to imagine or conceive of would therefore be a being of that fundamental nature. Any other description of a being higher would be a form of words without a mental picture or conception to correspond. The conception of merely all pervasive force, or tendency or law or any of those expressions that some persons insist on as the most competent conception of the highest being, is immeasurably lower than the conception of what we know a man’s nature to be, increased and expanded to the required dimensions or infinity.

Not only is this conception of God in terms of man's nature the most correct and competent from a scientific standpoint, but if the revelation or the lesson is addressed to men, especially to men of very medium philosophical education, the only way the acts of God can be made vivid and intelligible, so as to have ethical force and value, is to portray them in terms of something known, namely, of the activities of men. Nor is there impropriety in this even dynamically considered. For though God is omnipotent and His acts infinite and eternal, yet the part of any act that affects a small and finite man can only be a finite part of the infinite act, and in as far as he can understand that act of God, being small, he can only understand a finite part of it. It is therefore both necessary and proper, if any representation is to be made to man of the acts of God, that they should be represented in the form of acts of a finite character, and the most appropriate form would be that of the highest species of acts we know of, namely, the acts of men.

Moreover, that form of imagery is both beautiful and expressive. Take for instance one of the very first statements in the whole book :—"The Spirit of God brooding upon the face of the waters" (Gen. i. 2). A stickler for bald scientific terms might insist that in describing this most primitive stage in the great primordial "Fire Mist" when the process that was to develop motion, order and all the successively evolving worlds and systems was only just about to begin, we would more properly say, "There

somehow came to be a tendency towards heterogeneity and towards order in this primitive chaos," or a law and energy, a process, a great movement, or something of that kind, was present there. Such a terminology may appeal to those who have a special fondness for such vague and indeterminate expressions, but really the content of any or all of them is immeasurably below that of the expression used here,—an infinite something, enough greater than all the whole great universe process to have produced it all, and yet of a nature comparable to the thinking, knowing, feeling and willing mind of man, in imminent contact with that vast expanse of being just begun to be, and as it were vitalizing or informing into it the potentialities and directive tendencies that should start the great universe process and begin the great course of universe evolution. I question if the human mind is capable of conceiving a greater thought than is contained in that little primitive statement.

Or take again the statement in Genesis ii. 8 that God planted a lovely garden and gave it for a home to the man He had made. A very pretty picture if it was a prosperous Hebrew farmer providing a pleasant home for his favourite son, but very inappropriate, we are told, to be spoken of God, whose acts are infinite and eternal moving the whole universe with a single impulse and embracing a million years in a single thought. That, however, does not take into account that it can be only an infinitesimal part of that infinite act that can impinge upon

the little finite being, man, and so can be properly said to have been acted with reference to him. You may tell me truly that the ocean is a vast, deep, tremendous expanse of water, with character and contour so extended, intricate and mysterious that I can form no adequate conception of it at all. But that does not prohibit me from rightly saying that the cove and rocky pools and sandy beach before my seashore cottage, where my children wade and play, is really the ocean. It is precisely the ocean presenting itself to me in a form and measure that I can see, know and enjoy it. This is true, though all the other about its mysterious vastness and unknowable intricacy is also true at the same time. To the man who was intended to enjoy it, though the act was an infinite act embracing the whole universe, and the impulse that caused it was an eternal impulse put forth at the beginning of time, it was just as truly God planting that garden and putting him into it, as though that was the only act that God did, and which He accomplished at the expense of toil and trouble.

Moreover, the great lesson that was desired to be conveyed by the account was the lesson of God's personal and intimate care for men,—a true and most important lesson,—and that lesson could only be impressed by exhibiting this act in the littleness of human proportions. Especially so to the simple minded people of that age to whom it was originally addressed,—and to nine-tenths of the people of this age too, for that matter.

The same principle illustrated here applies to countless passages all through the Bible where acts of God are referred to in the familiar language that we would use for the acts of men. In the first place, to impress men that there can be and is a real bond of sympathy and fellowship between God and them, it is absolutely necessary to express God's acts and feelings towards them in terms of human activity and feeling. Any other form or expression or language would have precisely the opposite effect and make men feel such a fundamental and impassible difference between God and themselves that they would not believe any fellowship to be possible and so would never seek to have it. We may notice here that it was precisely for that reason that God revealed Himself in human form in the person of Jesus Christ, that men might come to feel the possibility of fellowship with Him. If that object was so important as to warrant so great an act as that it certainly is not strange that other acts of God, intended chiefly to foster a feeling of fellowship, should be narrated and described in the only kind of language capable of fostering that feeling. For we must recognize that the chief reason in all God's revelations and special acts towards men is not to supply some lack in the general course of natural events or even to reveal some truth that could not otherwise be learned, but precisely to make possible and increase on man's part the relationship of fellowship and friendly communion.

Nor is it improper to represent acts of the su-

preme, eternal and infinite God as of this small individualistic and defined character. An activity that may rightly be defined as infinite in its extent and application may as part of its result affect some very small result concerning some small individual, and since it was intended that that as well as all the other infinite amount of results should be produced it is perfectly proper to say that act produced that small result just as much as if that was the only result it produced. Gravitation is a great something extending out constantly from every part of the universe to every other part of the universe, but yet when a pebble or a rain-drop falls we say it was an act of gravitation, just as much as if gravitation was a little something located only there and doing that one thing. So God's activity may be vast, affecting the whole universe constantly, and yet also just as truly feeding the sparrow, painting the lily, converting a Saul, rescuing an Elijah or watching over an infant in its sleep, as though he were only a small finite agent with only just that one thing to do.

PICTURE OF PRIMITIVE MAN

One of the objections often made against this picture of primitive life is that it is too idyllic, too innocent and beautiful, whereas it is claimed that the teaching of evolution as to the beginnings of the race is just the opposite. It is claimed that evolution teaches that the beginnings of humanity must have been in the most brutal and debased savagery, much lower than the lowest races of savages that we

now know, and some of them are very low and savage. The Bible account, it is charged, pictures man at first as much higher, purer and more perfect than any men are now, and that they descended from that high state to their present condition.

But we must distinguish between what the account actually says and what our imagination adds to the picture. Also we must distinguish between what evolution actually teaches and what some one particular theory or supposition of some certain evolutionist teaches. Granting the most that the fullest and most thoroughgoing evolution hypothesis claims as to the continuity of the evolution process, granting that man as well as all other high forms developed by an unbroken process from the first primitive cells, even setting aside entirely all claim to a break in the process and a special creation or something different added in a special way in the production of man, it still does not necessarily follow that primitive man was the degraded, vile, despicable creature that these objectors would picture him. None of the other species of animals are degraded, vile and despicable in their natural state. For the most part they are comparatively perfect and noble. The lion, the stag, the eagle, the night-ingle are almost types of nobility and excellence. In relation to the circumstances in which their lives are to be spent they are good and admirable.

Nor are they necessarily offensive in those points which are counted distinctively human virtues. Not all animals are ferocious and blood-thirsty. Sheep,

deer, and in general the herbivorous animals are gentle and harmless. And many anatomists claim that the form of men's teeth declares them to be naturally herbivorous animals. But more than that, many of the lower animals excel in some of even the higher virtues. Many animals and birds are what we would call in human relations monogamous and strictly chaste and constant, choosing a single partner and remaining faithful and constant to that one through life. There is nothing in the lives of lower animals that corresponds to the human vice of drunkenness or addiction to other hurtful drugs. And again, on the positive side, where, even in human society, will we find anything to rival the faithfulness, devotion and loyalty sometimes seen in an Arabian horse or a Scotch collie dog? True these last mentioned virtues were brought out by domestication, but they must have been possibilities in the character of the animal none the less. And domestication is only a special line of directed evolution, just as truly evolutionary in its essence as any other evolution.

There is nothing therefore in the teaching of evolution that shuts us up to considering that the primitive man was a low, ferocious, vile and despicable creature. Nor does the fact that some or all the varieties and species of the monkey family, the ones considered nearest in affinity to men, have many base and repulsive characteristics necessarily imply that primitive man also had those characteristics. On the contrary it would be more plausible to sup-

pose that it was just because for some reason he did not have those undesirable tendencies he advanced to a higher grade of life and it was those characteristics, at least in part, that prevented the advance of the other members of the family and fixed them in their present grade of living.

Nor again is it a legitimate argument that because we can find savage races now that are ferocious, cruel and have many other bad qualities, therefore all men must have developed up from that state and at one time been in that condition. In the first place that is precisely the question at issue, whether or not there has been, as this record pictures, a "fall" or lapsing into a lower state at a certain stage of their history. Such lapses and deteriorations are quite common in the history of all the rest of the animal species, and why should it not be found in the human species? Indeed the very fundamental law of evolution is that there is a constant tendency to variation in *all* directions, those that make for deterioration as well as those that make for advance. It is because those individuals or communities that have happened to make the variations in useful directions have more power to survive and do survive while the others die out, that there is a permanent advance. These others may survive by isolation and favourable circumstances for a while, however, or because their variation, though on the whole disadvantageous, yet has in it some elements of advantage under certain circumstances.

As we take a broad view of human history, as far

back as we can find records, we find that just precisely that has been the actual process. The races or parts of races that have had some variation in a useful direction have become dominant and not only the other races whose variation happened to be in non-useful directions went to the wall, but after a while this very dominant race, or parts of it, developed variations of a harmful tendency and began to perish, while some other part of that race or some neighbouring race developed useful variations and became dominant. Thus there has always been around the highest civilization a fringe of retrograding, deteriorating civilization, that has been sloughed off because it had developed disadvantageous tendencies.

Why then should it be thought more logical to take these sloughed off, decadent civilizations or savage races as the standard of the central type from which the progressive variations have been made than to take the other extreme, the race that has made the most favourable variation and is now in the highest place? Both these are extreme members, and the primitive condition is to be properly looked for between them, a condition of life that while it did not have the highly developed virtues and attainments that have brought these races to this high plane, on the other hand also did not have the debasing, debauching or savage tendencies that have kept those other races from advancing or have pulled them down after they were once well advanced.

Again, as indicated above, many objectors read into this primitive picture many features that are not

in it at all. Their conception is really derived from Milton's "Paradise Lost" and not from this Bible poem. Or, as Christians, they very naturally conceive that the innocent, unfallen man must be better than the best of the partially sinful men that they know, and so have in mind something nobler than the best Christian man that they know or have heard of, and picture this first unfallen man as of that character. The Biblical poem, however, makes no such claim and paints no such picture. Read Longfellow's *Hiawatha*, or some of the accounts of early intercourse with Indian and other uncivilized races, and there is nothing in this Biblical picture that is out of harmony with the better features of the life and character pictured there. Indeed to some extent the atmosphere seems to be the same. The primitive man is pictured only as in close touch with nature and the animal creatures,—as dressing and eating the natural fruits of a garden and giving names to and seeking companionship with the lower animals, precisely the status of the Indians and other so-called savage races. On the moral side he is at best but negative, or rather entirely colourless, as no incident has yet occurred to develop or express any moral character. Indeed if that be a virtue he can hardly be credited with even that virtue, for at the first opportunity he does develop moral tendency of a wrong kind.

ORIGIN OF SIN

As to the so-called "fall," if we take the actually recorded picture itself, and not some fanciful scene

that some one has imagined, we have a picture not at all out of harmony with the general principles and course of evolution. The fact itself, which is stated here in poetic language, is that men emerged into a state of moral consciousness, and the change was precipitated by an immoral act. That would be the most natural and obvious translation into the exact language of science of the poetical conceptions "Forbidden Fruit" and "Tree of the Knowledge of Good and Evil."

Now we know that at some point in the evolution men did first emerge into the state of moral consciousness. There was a time when that moral consciousness did not exist, when they had no knowledge or feeling of moral distinctions. The lower animals, as far as we can judge, do not have any such knowledge or feeling now. The progenitors of men, when in that stage, did not have it. Men do have it now. Therefore there must have been some time when they first acquired it. Studying child-nature, we find that often a whole new range of feeling and interest, a whole new faculty as it were, will suddenly break upon the child consciousness. Especially will some very intense experience produce such fundamental changes suddenly and at once. If the development of the individual is a reduplication of the development of the race, it would not be unreasonable to suppose that this sense of moral distinctions,—this moral consciousness,—developed at some time suddenly in the human race.

And if we were to inquire what might be a possible cause to bring about its sudden development, we find that other faculties often emerge suddenly into consciousness through some sudden object of resistance or occasion for their exercise. Thus a child learns of heat or of pain by burning or bumping itself. Its first development of fear comes through experiencing some fright or danger. In the same way a passion for music, art, oratory or the like, sometimes first arises in the soul through some intense experience of the object of that passion. In the same way it would be natural to suppose that the sense of right and wrong, the moral consciousness, would first arise in the human race or human individual through some conspicuous and direct breaking of something recognized as a reasonable restraint. How could such an event be more aptly and beautifully expressed in poetical language than by just the form of expression that is used here:—Breaking the direct prohibition of God and eating of “The Tree of the Knowledge of Good and Evil”?

Of course this might have been by some act as instantaneous as the plucking of fruit from a tree and eating it. The whole destiny of the world has more than once been influenced by single acts as short and instantaneous as that. But the language does not require that interpretation necessarily. Viewed in historical perspective the American Revolution or the great Reformation would be spoken of as one great act. Even such long processes as

the downfall of Rome, the conquest of India or the colonization of America, if viewed at a sufficiently great distance would seem as one great act in the historical drama, though their actual operation may have extended over decades or even centuries of time.

All that the language actually expresses, then, is that the human race or one primitive human individual, at some time, by the conscious breaking of some recognized reasonable restraint, first emerged into the consciousness of the moral distinctions of right and wrong, and that he emerged into that consciousness with the feeling of moral stigma resting upon himself, and with the awakening within of a lawless tendency, a seed which rapidly grew and multiplied, and which both by heredity and example has been transmitted to all succeeding generations.

Of course the driving out from the Eden of peace and innocence must necessarily follow that act and state, and the "flaming sword" of conscience would forever prohibit a return there. And the fig leaves of shame and the fear of the voice of God are too familiar facts in the experience of every one that has committed sin to require any special justification.

UNITY OF THE RACE

In this connection we may notice the objection that this account speaks of all the human race as derived from one ancestor, whereas it is claimed evolution teaches that a whole species of thousands

or millions of individuals all rise gradually by imperceptible stages from the lower to the higher plane and there could not be any one common ancestor of the new higher species.

This objection was more common a few decades ago than it is now. It was more common at the time when men thought they could explain the whole range of evolution by the single formula of the "survival of the fittest," and in the confidence of early half-knowledge were very impatient of any opinion that did not range itself under the operation of that one formula. At the present day evolutionists, with more knowledge, are not so insistent that the whole range of evolution must be all accounted for under one formula and one cause. Indeed most of them are more inclined to think that there were many different causes and many different ways in which the results were produced and higher forms secured.

One of the causes which is considered to have been at some times operative, is the occurrence of what are termed "Sports," that is to say the birth of offspring that differ from their parents not only in very minute, imperceptible degree, but which differ from their parents in a very wide and fundamental degree, so much so as to render intercourse with the rest of their species difficult or distasteful. If this new strange individual found a mate and was able to perpetuate its peculiarities, a new variety, or even a new species, might in this way be originated at a single step. It would not be at all contrary to

the present canons of evolution if a first man and single ancestor of the human race had originated in that way.

As to the conception of the special, miraculous creation of a mate for that one man, if that picture is to be interpreted as a literal fact, there need be no scientific objection. If, as we have seen, the evolution motif calls for some act of intercourse from God to man of the nature of personal fellowship as soon as man has evolved to a plane capable of receiving that fellowship, that sympathetic act of God towards man would naturally be of a miraculous nature. In a race where the highest, and most valuable of relations both ethically and evolutionally is to be that of the family and the married relation, it is not inappropriate if this first necessary act of fellowship in welcoming the newly evolved soul is one which glorifies and renders sacred that relation. And, by the way, the lesson and appropriateness is just the same if what this poetic picture refers to is not one small individual action but some great fundamental, generic fact, if for instance all the terms refer to human society and its needs and relations rather than those of one specific individual.

We may add here, also, that the objections to the unity of the race that once used to be urged on the ground of philological or anthropological reasons, have now been pretty generally abandoned. There is now a pretty general recognition that there is no obstacle to belief in the unity of the human race on the ground either of differences of language, differ-

ences of anatomical structure or any other racial differences. On the other hand the great majority of this evidence seems now to point positively the other way,—towards a common origin for all races.

On the part of science, then, there would seem to be no valid objection now if we choose to interpret these early pictures as referring to one individual man with his immediate family. But when we come to study the pictures themselves more carefully we find, on the other hand, that it may not be necessary to give them that individualistic interpretation after all. Indeed the reasons for giving a different interpretation come from the wording of the pictures themselves, not from any impossibility or absurdities involved in the other interpretation.

In the first place, the genus of Hebrew history is not individualistic. Its unit is the race or nation, and the individual comes into sight only as he is genetically related to some great race movement. Thus we might mistakenly suppose that the accounts of Abraham refer to a single emigrant travelling with his wife and nephew, if a single incident (Gen. xiv. 14) had not shown us that it was a great tribe of a thousand or more people with Abraham as its head. Names like Israel, Judah, Cush, Mizraim and the like, are used perfectly interchangeably of an individual and of a tribe or nation of which that individual was in some sense the head or representative, *e. g.*, Hosea xii. 12, 13. One of the most remarkable mines of antiquarian information

was discovered some years ago by recognizing that the genealogies in Genesis x. do not indicate individuals and natural family relations but nations and races. The extreme longevity associated with the various names in Genesis v. seems also to be an indication of the same kind of a fact, the same way of using names. It would then be not only not necessary but almost strange to suppose that in the history of this most remote and mysterious period of all, the poet has confined his names strictly to represent single individuals.

This would seem to be rendered the more unlikely also by the fact that the name used, "Adam," is not the proper name of an individual, but just the Hebrew word meaning "man." As we read farther into the record, expressions are used which seem entirely incompatible with the idea of one individual with his family being the only existing human beings. In chapter iv. 14 when Cain is driven away for his crime he expects to meet other men where he would go who might kill him. A little further on, in verse seventeen, he is spoken of as "building a city." Such an event would be very natural if it was a race or numerous tribe with perhaps the dynasty or house of Cain as the ruling power, but hardly possible on a purely individualistic interpretation.

The true interpretation therefore would seem to be that in very early times, when the great historical movements which have evolved the world's civilization were just beginning, there were certain

great facts and events which, at least on their ethical side, bore the aspect which is symbolically pictured forth in this poem. It is historical events that are portrayed, but much of the language is symbolic. Just how much we may not perhaps be able to determine, and neither in the mind of the writer, nor in fact, is it important to discriminate.

Perhaps a possible interpretation of the whole picture would be to consider it as portraying crucial events at the initiation of the particular movement which was the first branching off of the races and tendencies which started the line of our present moral and social civilization. The "mist" watering the earth simply pictures the early morning hours of time. The absence of plants and herbs might symbolize a time before the era of agriculture. The "garden" may be either merely the condition or the favourable place of the earliest civilization. The four rivers flowing out of the garden of course cannot be intended to indicate physical streams of water, as they never act thus, flowing from a centre outward to widely separated regions, but very naturally represent streams of influence, for instance of civilization, extending outward into precisely the four regions that are known historically as the early civilized centres. Is this paragraph possibly another such rich mine of archæological information as Genesis x. has been found to be? The other figures all have also their appropriate signification. The symbolism of the "Tree of the Knowledge of Good and Evil" and of the eating and consequent ex-

pulsion from the garden have already been discussed above.

PLACE IN THE EVOLUTION SCHEME

When we take a comprehensive view of the course of the Bible history we see that it corresponds exactly to the evolution idea, namely, progress, by means of successive selections, and development of the superior selected ones. There was a selection at and immediately after the time of Christ, from the Jewish nation, of that portion of it whose hearts were most nearly in accord with the divine plan and ideal, to be the leaven to leaven the world, namely, those that became Christians and the germ of the Christian Church. The Babylonish captivity and return was another sifting or selection, sifting out for the future nation only those most earnest and devoted to the divine plan and project. The division into northern and southern kingdoms in the time of Rehoboam was another such a selection, sloughing off the more worldly northern tribes that the more godly, devoted and loyal Judah and the south might be separated to propagate and perpetuate its higher ideals. The choice of Jacob and setting aside of Esau was another such selection of the same character and also the choice of Isaac and setting aside of Ishmael. The choice of Abraham from among his kindred and countrymen, of course, was a very typical case of such selection, and going further back, the choice of the Noachic family from among a corrupt world, was another.

May it not be possible, then, that we have in this

Adamic narrative another, and the first of the long series of selections, the first step in the long process of ethical and social evolution? And that the Adamic individual or community, whichever it was, just like Abraham or Noah, was a selection out of the great mass of one to be the beginning and start for a new world. If that were the case it would not be difficult to assign a meaning to that mysterious passage in Genesis vi. 1-4 about the "sons of God" and "daughters of men." Of course also in that case the passage about Cain's city and the persons he would meet in his wanderings would be perfectly plain.

All these, however, are merely speculations. It is the province of exegesis, not of this discussion, to interpret all these passages. These suggestions are made, however, to show that there need be no opposition between this part of the Bible and the most advanced scientific theories, but on the contrary a remarkably suggestive agreement.

IMMORAL ACTS BY BIBLE HEROES

One more important objection that is sometimes urged is as to the moral character of many of the acts that are recorded with seeming approval, and sometimes even as done under the direction of God Himself. A good example of this would be the conquering of the land of Canaan by Joshua and taking the land from the former inhabitants. Judged by our present day standards of ethics or of international law much that was done in these cases could not

be approved, much less held up for a model and display of the will of God. Viewed merely as accounts of ancient history they are not on any lower plane than the average of the events of the age and so not at all censurable, but yet it is held, since God is perfect, any act that He should approve and hold up as a model must be an act not only up to the standard of the customs then prevailing, but one that conforms to the highest standards of morality of this or of any other future age. It should be a commendable act not only from the low moral standpoint of the age in which it occurred, but absolutely from God's perfect standpoint.

But this view quite mistakes God's moral relation to men and His way of leading them. It is a view that arises from the "mechanical theory of God's activities" and not the view that must necessarily be maintained from the evolutionist's standpoint. It represents God as something like a great magistrate or policeman, who has made a great list dividing all actions and dispositions of mind into two classes, good and bad, and whose only office is to see that men do only the kind of acts contained in the first list and none of those in the second list. No act that is catalogued in the second list can have any other consideration by God but complete disapproval and condemnation. God can give no directions or advice to men that does not consist solely and completely of actions catalogued in the second list.

The evolutionist view, on the other hand, does not

primarily and in the deepest analysis take account of acts merely as such, at all. Its view is that there is a trend or direction to all events. The direction of the progress already made points towards an ideal, a perfect condition, which if attained the universe would be as high, complete and perfect as it is possible for it to be. This perfection includes the highest possible development of all the existent components, both physical and spiritual, and the most perfectly advantageous interactions and relations between and among them all. Such a state is the goal at which the evolution process is aiming, the direction in which, to be called progress, it must be tending.

Translated into theological language, that ideal or perfect condition is "The purpose of God." It is the thing that He is seeking to bring about in all His work. His one great work, which began with what is technically called "Creation" and which is still under way, is the work of producing such a universe. Whatever tends to bring the universe nearer to that condition is in accordance with God's will. Whatever tends to make any individual or any region more nearly fitted to correspond with and fit into that condition, must be considered as having God's approval. It is the tendency rather than the analytical character of individual acts that is the crucial matter. For that matter we may suppose that there never has been an act of any man or animal that is fully up to the plane and standard of that which would prevail in the absolutely perfect condi-

tion of the universe, which is God's ideal, but we would not say, for that reason, that everything that has been done up to the present time was contrary to God's will, and that it would be derogatory to Him to suppose that He had any agency in bringing any of it about.

For instance, we may imagine some primeval animals, the progenitors far back of the future race of man, grovelling in the dirt and tearing each other with their teeth and claws. Yet some of even their most ferocious and their most disgusting practices may have been absolutely necessary to the progress of their species along the line that led up to the human, mental and physical organization. Evolution does not rate such actions by their analytical character and their correspondence to a certain catalogued list. It takes account only of direction and tendency. Whether or not there is a standard of morality different and separate from this, at any rate this is the standard of the evolution process, and this the theistic evolutionist translates as identical with the purpose and will of God.

Now, if we were to suppose God bringing influences to bear upon any man at any time to do a certain act, in such a sense that it could be considered that God was commanding or directing him to do that act, what kind of an act would it be plausible to suppose that God would so direct or command? In order to answer that question let us first go back to those primordial progenitors of man whose welfare and progress demanded that every

individual should tear and destroy with teeth and claws the other individuals that interfered with his comfort and advantage. Would we maintain that the only direction or command that we could consistently suppose God to give them would be to "Love their enemies" and "If any one struck them on the one cheek to turn to him the other also"? On the contrary might we not even suppose Him to urge them to so train themselves that they could un-faillingly kill the other without sustaining injury themselves, and also to so kill that the flesh of the slaughtered one could be used for food. Such advice would be precisely in the line of evolutionary progress, and so we must consider it to correspond to the will of God, because it is precisely the thing that He has been doing in the great evolutionary process. And yet judged by the categories of morals that apply to us in this twentieth century it would be murder and cannibalism, two most detestable crimes.

When we take, then, the case of Joshua conquering and driving out the inhabitants of the land of Canaan, we must view the act not only in the light of "The Hague Tribunal" and the "Red Cross Society" but also in the light of those primordial ancestors, tearing each other with teeth and claws, for both of these were but different stages brought about by the same course of evolution, that is to say, by the will of God. No one of the three is to be properly judged by referring it to a definite standard in a catalogued list, but each of them, the last as well as

the first, is to be rated only as it is or is not an advance upon that which went before it, that is to say, whether or not it was something contributing towards the attainment of the ideal of perfection that is the goal of evolution,—or the full purpose of God.

If we examined the facts we would probably find that every one of the tribes which Joshua dispossessed had themselves gotten that land in precisely the same way that Joshua took it away from them, in some cases only a generation or two before. The customs of international usage of that time did not confirm a tribe or government in the perpetual possession of any country except as they had the power to keep it, any more than the usages of this age protect and confirm a merchant in the perpetual possession of certain customers and patronage, except as he has the power to keep it, nor than the customs of the time of the primordial ancestor confirmed the individual in the perpetual possession of his own skin and bones except as he had the power to keep and defend them.

The only pertinent question, therefore, is whether the possession of that territory by Joshua and the Israelites was better for the cause of humanity and the advancement of the race than its possession by the other inhabitants. If it was, then it was a forward step in the process of evolution, which is equivalent to saying that it was the "will of God," and we might confidently say that God ordered or directed it, even if that statement were not made in so many words in the record.

In this connection we may call attention to the fact that the criminality of murder, or the law against taking human life, is something that in any case is only applicable to the relations between one man and another man. It is not founded on any such thing as an inherent right that men have to life. They do not have such a right. They have no right at all, and all must die some time. Indeed death, or the ending of the life of the unsuitable ones, is a chief source of evolutionary progress. It is needless to say then that God is just as free to end any or all life at any time He wishes as He is to allow new life to originate. The fact therefore of God being conceived as ordering a great slaughter here, even including innocent persons such as children and many of the adults, is not a misrepresentation of the nature and will of God. If it is then all the course of evolution is contrary to the will of God, for precisely such slaughter has always been one of the chief causes of evolutionary progress.

What has been said here with regard to Joshua applies equally to such a command as that to Saul to exterminate the Amalekites (1 Sam. xv. 3), or any other of the wars that God is represented as ordering or approving. The only question with regard to any of them would be whether they conduced to the best interests of the human race. If so there would be not the slightest incongruity, from the scientific standpoint, in conceiving them to have been commanded by God.

Or take an example already cited above, which

Christ Himself discusses and justifies. By the great ultimate standard to which men are to conform, the marriage bond is permanent when once formed, and any breaking of it is wrong. But Moses, who is always in the Bible conceded to have acted with the authority of God, made definite directions for an orderly and least harmful way of putting away a wife. In other words, with God's approval he found the people addicted to a bad custom and he took steps to have them follow another custom, that custom also being confessedly bad but yet better than the custom that had hitherto prevailed, and as high a custom as it was practical to try to introduce.

The principles that underlie these two instances will account for a large number of those instances in the Bible where a thing that we would now properly estimate as wrong is recorded as being done with the approval or even the command of God. An act may be right and desirable at a certain stage of development, or in certain conditions, that now or at some future date would be wrong. Also "divine government" does not consist exclusively in propounding the rules of perfect conduct and punishing every act that is not in exact accord with them. Rather God's directive influence upon men is exerted to gradually lead them up to higher and higher levels of custom and conduct, just as fast as they are able to advance. It is following His will if each new level is a higher one, and each new custom better than the one before, even if that new custom

is still a faulty and sinful one and that new level still far from the summit.

One more important principle must be noticed. God in working out His purposes uses men. In every age and every stage of the world's advancement He uses the men of that age and of that stage of advancement. We may say, perhaps, that in every age He used by preference the comparatively best men of that age to be His instruments in any enterprise of a moral or religious character. But He did not confine Himself to using only men of perfect character:—there never were any such. Nor did He insure that in carrying out some enterprise of great moral import these men should not do things that were far from moral. He neither guarantees nor indorses all the acts of any of the men that He uses for any of even the most sacred enterprises. He merely takes men as they are, acting as their ordinary propensities lead them to act, and so directs them that the thing desired for the advancement of the cause in hand is accomplished. He does not undertake to guarantee that it shall be accomplished in as elegant or as humane a way as the best men of the twentieth century might have accomplished it. He merely sees that it is accomplished, albeit accomplished in the way that this man's character and propensities lead him to accomplish it—or that the character and propensities of any other man of that age would lead him to do it.

To take a humble analogy,—Suppose a primary school-teacher wished to have a letter of thanks for

some favour to the school, or some other letter, written by the hands of some of the little children in the school. She chooses one, perhaps the most capable child, and gives him the task of writing it. The phraseology may be very awkward, the letters crooked and ill formed, the page blotted and smeared with dirty finger marks, but yet what the teacher asked has been done and the letter written. And if, for sake of the argument, we suppose that it was essential that the letter should really be the actual work of the children, that would be the very best she could do. But that does not mean that the teacher wished for or approved of those blots and the imperfections of the writing.

When we read the history of Abraham, Jacob, David and others, we find in their marriage relations and other habits and acts many things that would completely outlaw them from any respectable society to-day. And yet they were held up as the religious leaders and teachers of righteousness in their day. Samson, Jephtha and others of the early heroes, if living to-day, would be classed as little better than savages and bandits. Indeed the character and acts of most of the Bible personages, judged by the standards of our twentieth century ideals, would appear rather black,—almost as black, perhaps, as the character and acts of our own best and noblest men will appear judged by the standards that will be in vogue three thousand years from now.

But that is not a just way of judging the men of that age, this age or any other age. On the other

hand, God takes the men of each age and of each plane of advancement, just as they are, and He commissions some, usually the best of them, to be His agents in carrying out enterprises for the bettering and advancing of their race. That is the way, with one single exception, that He has always done, and that He is doing now. It is no impediment, therefore, to considering the Bible a revelation of God's will, that that is the way He is represented as doing in all the incidents and enterprises narrated in the Old Testament histories.

PART III
Christology

I

PERSON OF CHRIST

GOD APPEARING IN THE FORM OF MAN

WE have considered a number of forms of revelation. The most important of all remains to be considered. It is the revelation of God in personal form in Jesus Christ.

When we approach that question we are not only approaching a great mystery, but also a question of boundless proportions. That personality has unquestionably exerted, and is exerting an enormous influence upon the thinking and lives of men, an influence that extends much farther than the knowledge of the historical events. The degree in which lives are influenced differs greatly, but everywhere the influence is for the better in just as far as a life feels itself attracted by that life and personality.

We might perhaps be content to rest with this confession of mystery and power, for theologians confess it is impossible to fully understand and explain that personality, and science and philosophy seem disposed to meet every attempt at explanation with such an energy of objection that there is danger of the sweet influences of that matchless life being lost in the discord of strife about its definition.

But the world will never be willing to rest permanently in such a negative position. At least we may make the careful inquiry whether there is any-

thing in the certified teachings of science which is in conflict with the definitions that theology is able to make. It will have some significance to find whether the latest developments of science tend to make those definitions seem more reasonable or less reasonable, whether the tendency of the latest discoveries and teaching is towards or away from the traditional beliefs.

When we speak of the "traditional belief," it is difficult to frame any one definite proposition that would be accepted by all as an expression of the traditional belief, since there has always been so much discussion and difference of opinion on the subject, but in using the term here I mean to refer to what is often called the "Orthodox" or the "Trinitarian" view, the view that holds that Christ was in a real sense "God revealed," that is to say ;—when one saw the person Jesus Christ he saw God in just the same sense as one would say he saw his father or his brother when he looked at the material body that bore that name. Doubtless, in the multiplicity of opinions and definitions, there are many persons who would not agree that this is either the orthodox or the traditional view, and it is not my purpose here to maintain that it is, or to discuss that question at all, but simply for the purpose of our discussion here to hold up that view and inquire whether there is anything in the latest teachings of science that tends to make it untenable.

I may add that, at least in its literal reading, that view is expressed in the Bible. Jesus is represented

as saying in so many words just that, namely : "He that hath seen Me hath seen the Father," and in a number of other places the same thought is expressed as strongly, or even more so, in other words. Here again it would lead us too far aside to go into any consideration of questions of the interpretation of any of these passages, but all would admit that it would be greatly in the interests of simplicity and ingenuousness of interpretation if it could be established that there was nothing in either philosophy or science that offered any objection to adopting the view of the person of Jesus Christ which we have postulated above.

Among the most plausible objections that are urged against the belief that God revealed Himself in that way, we might note the following : First, from the philosophical or speculative side, it is claimed : (1) That it is inconsistent with sane reason to suppose the infinitely great being conceived as God became the small being we see as man. (2) It is crass anthropomorphism to suppose that God would assume the form of a man. (3) We cannot conceive God as acting without adequate purpose, and to do such a thing would be a purposeless and unreasonable thing. (4) It is claimed that it mars the force of Christ's life as a great example to consider Him so essentially separated from all the rest of mankind.

Second : on the practical side it is claimed that it is impossible, if not a contradiction in terms, for a being to be one, and also two or three, in the way

this view asserts God to be. Or again the view is judged absurd because God is considered as having the most intimate contact and control at all times with all the universe. What would happen then when He had reduced Himself to the dimensions of a finite small man? These and similar objections are urged against the possibility of such a thing as is here conceived, from the practical side.

With regard to the philosophical or speculative objections above, we may say briefly but definitely that they are unsound and illogical. As to the first, that it is unreasonable to suppose the infinitely great God revealing Himself in the finite proportions of a small man, to take such a ground is really to deny that it is reasonable for God to reveal Himself at all. For finite, limited man to thus limit the possibilities of infinite, unlimited God is in the highest degree absurd and illogical.

It is true that, in the sense that no man would be able to receive such a revelation, we might say that God cannot reveal all of Himself to any man,—all His powers and attributes and all His infinite extent or expanse. But that is no reason why He may not reveal to any man such aspects or features of Himself as that man has capacity to perceive. And so doing He would be revealing Himself in just as true and real a sense as anything is ever said to be revealed. We never see or perceive all of anything, merely certain features or aspects of it. I do not see a man completely in the absolute sense, but only a general indication of his outline, and a very small

portion of his outer surface. Even with scalpel and microscope I would not be able to see all the mysteries of even the material substance of his body.

Now if God is to make any revelation of Himself to man at all it must necessarily be in finite proportions. But if it is in finite proportions there is no intrinsic reason why it should be of one magnitude rather than another. There is no such thing as large or small in an absolute sense. These are merely terms used to compare one object with another, or with our own size and perceptive powers. The whole world compared with the size of the universe must be called exceedingly small, but the smallest atom cannot be said to be absolutely small, for we can conceive of dimensions as many times smaller than the atom as the atom is smaller than the world, or the universe.

Had God in revealing Himself appeared in some form as large as a mountain, for instance, or in some manifestation coextensive with the whole world, shallow thinkers might perhaps consider that a form of manifestation more probable or more appropriate to so great a being as God. But such thinking would be very crude and shallow indeed. From the standpoint of infinity there would be no more intrinsic appropriateness in the size of a world or a universe than in the size of a man, or an atom,—or a million times smaller or larger than either or any of them.

The only consideration that could be possibly pertinent would be to have the manifestation in the size or dimensions best suited to accomplish the

purpose desired. If the purpose desired was to reveal love, and win man to trust and fellowship, anything larger, or smaller, than the common dimensions of an ordinary man would have been entirely fatal to that purpose. We make the needle's point very small, not from poverty but because that is essential to its usefulness.

In answer to the second objection we may say that exactly the same reasons apply and His purpose could be best accomplished by appearing as a man with all the acts and attributes of a man. It is not anthropomorphic bias, or egotism, on man's part that leads to the conception of God appearing in that form, but simply that that is the form in which it would be necessary for the appearance to be made in order to accomplish the object intended by it. God is revealing Himself constantly, in a great many different ways, to accomplish varied and different purposes, but the only way He could accomplish the purpose He desired at this time was to reveal Himself in the form of a man, with all man's attributes, and going through all man's experiences. He simply did the thing He wished to do in the only appropriate way that it could be done. That it was an "anthropomorphic" way is not an imagination of man's egotism, but a result of man's limitations, namely, that he could not have received it in any other form.

PLACE IN THE EVOLUTION SCHEME

The third objection above would seem, at first glance, to be more serious and plausible. If God

were absolutely perfect He would have made provision for all contingencies in the original ordering of things, and would not have found it necessary to intervene from time to time to supply some lacking part, or restore something that had gone wrong. To even suppose there was a reason for such a special intervention is to attribute lack of forethought or ability in the first ordering of all things. There could therefore be no reason for such an intervening or special revelation, and so it could never occur, for God could never act without sufficient reason.

But this objection is entirely based on the idea that such a revelation of God is a "special intervention" or something apart from the great universal "order of things," established once for all at the beginning. This idea is entirely erroneous. It is no more a "special intervention," or "apart from the original established order of things," than the initial appearance of life, or the first separation of a revolving sun from the original "homogenous fire mist," was a special intervention and apart from the order of things as first established.

If it is claimed to be special because it occurred only at a special time and does not occur continuously, we must remember that the same is true of life and of many other things. There was a time when there was no living organism of any kind existent anywhere in the universe, and there will come a time in the future again when there will be no living organism existent anywhere in the universe. Life is in that sense a "special phenomenon" ap-

pearing only at one certain time during a limited period. For though the length of time that life has existed and will exist may aggregate many millions of millions of years, yet in comparison with the whole period of the universe's existence that may be but like one year, or one day. There is nothing "special" therefore in the fact that this particular species or instance of "God revealing Himself" appeared for only thirty-three years out of the many thousand years of man's history.

The misconception probably arises from the erroneous practice in many theological discussions of considering the "Incarnation" as only a means or necessity for the "Atonement." This is wrong and unfortunate. It would be more nearly a true conception to consider the "Atonement" a necessary result or incident of the Incarnation. At any rate the Incarnation, or revelation by God of Himself in human form, is a great, primary fact in itself, and the reasons for its occurrence would have just as inevitably brought it about if there had been no sin and no cause for "Atonement."

In fact it is the "Incarnation" itself, that is, the self-revealing and fellowship offered by God to men, that is the fundamental purpose and object, not some teaching to be conveyed or other work to be done through that as a means. The teaching effected, and even the Atonement are merely to be classed as "incidents accompanying" that great act. To use a term employed in human enterprises they might almost be compared to what is classed as

"by-products." By that it is meant not to infer anything as to their greater or less importance, but merely their logical relation. The revealing Himself to man in a way to exhibit the possibility of intellectual or spiritual intercourse is to be considered as an end in itself, and an event of primary importance.

Studied carefully in that light it will be seen that some such revealing of Himself by God as is recorded to have been made in the person of Jesus Christ is a necessary and integral part of the process of evolution. Without it the process of evolution must ever have been as truly checked and incomplete as it would have been if there had never been provided such a thing as light, or if there had failed to be any redundancy of free oxygen to form the atmosphere.

We can imagine that there is a certain stage in the upward progress of things which might have been attained if there had been no such thing as light in the universe. But there came a stage when if there had been no light further evolution in certain lines would have been impossible. In the same way there came a time in the course of evolution when an atmosphere containing free oxygen was one of the essentials for the next higher grade of creatures to be evolved. In the same way again there came a time when for the next higher step in the evolution a self-revelation of God was necessary. Without it that next step could not be attained any more than the other mentioned steps could have been made without light or without air.

During the first primitive processes of breaking up the original "homogenous fire mist" into revolving systems of suns and planets a few very simple laws of motion and energy were all that were essential. But when a higher order of existence, namely, life and living organisms, came into being, then water, light and a number of other things were necessary for their continued existence and progress. In the same way, when the progress had reached a higher stage, where a higher order of animals, inhabiting the land, were to be produced, an atmosphere with a suitable proportion of oxygen, and a number of other conditions were essential for the existence and continued progress of that form of animal life. In exactly the same way, still further on in the course, when evolving man had reached not only the stage of intelligence and moral responsibility, but was ready to make the next step and reach a stage which contemplated spiritual intercourse with God, some appropriate form of self-revelation of God to man was just as necessary for the consummation of that advance, and so just as truly a part of the one great scheme of evolution as was the existence of water, or light, or air, or gravitation or any other of the objects or laws that had their place in that scheme. From the standpoint of science it cannot be considered a "special intervention" at all, any more than they are special interventions. It is just the furnishing at the required time of the required environment for the continuance of the one great process upward.

Nor may we say that it is essentially differentiated from those other common adjuncts of evolution by the fact that it was only brought into existence at a certain late time while they were laws or facts that existed from the beginning of the course. In the first place, we cannot say of all these other adjuncts that they always existed. Some of them also seem to have first come into existence just about the time they were to be first needed. It is very unlikely that the water on this earth was such that it would have been suitable to sustain life, or the atmosphere to sustain the orders of land animals much before the era when these things began to appear. Nor were the light conditions and facilities for vision suitable for the life of land animals in the earliest stages of the earth's history. The same would be true of many other things. It is no exceptional case, then, if the self-revelation of God in the form we are now contemplating did not occur until the time came when there were men of sufficient development, both mentally and spiritually, to receive and use it.

Nor is it a pertinent objection that all these other things, while possibly appearing in the given form only about the time they were needed, were really the result of facts and laws in existence from the beginning, while this self-revelation was an act initiated at that late time when it first appeared. In the very nature of the case it must and should be so. All these others are in their essence physical facts, made up of the interactions of matter, energy and law, which naturally are supposed to be con-

stant and continuous from the beginning. This has to do with the inter-activity of individual persons. It must necessarily be some personal, volitional act of God. The very object to be attained requires that. Personal intercourse between men always consists in such personal volitional acts, it may be speaking or some other kind of acts of one towards another. Without this, however near persons are to each other, there is no personal intercourse. Since, then, the very essence of this new thing that is to come into existence as the next step in evolution is a state of personal intercourse between man and God, there must necessarily be personal, volitional acts by God as the very essence of that personal intercourse. But personal volitional acts are by very definition not the necessitated product of continuously acting physical laws, but are definitely initiated by the individual at that definite time.

Indeed if we wish to press the point we can say that it too, like all the others, is truly *a necessary product of something that existed from the beginning*. Not a product of physical energies and laws, for it does not belong in that class. It is a product of the intention and character of God, and that has existed just as unchanged from the beginning as has the law of gravitation or light, or any other law or substance. There is nothing therefore in this self-revelation of God to man that warrants us in classing it as a "special intervention" in any sense to differentiate it from all the other natural causes that have contributed naturally to the upward course of

evolution. It is simply one of the latest or highest natural members of that series.

That this state of spiritual or intellectual intercourse between God and man is to be properly classed as a natural and higher step in the one continuous course of evolution I think is sufficiently evident and requires no argument. Man is the highest known evolved creature, and it is personal intercourse of person with person which is the highest kind of activity of this highest of creatures. It is higher than mere knowledge or power, either physical or mental, for it involves the play of all these and also the play of the affections and all of the whole man. As personal intercourse is the highest kind of activity, so the higher the class of intercourse, or the higher the person with whom intercourse is held, the higher the fact must be classed. Intercourse with God, therefore, must be the highest kind of all, and men enjoying that kind of intercourse must be on a higher plane than those that are not, and so must be classed as on the very highest plane of evolution yet reached.

THE EVOLUTION THEORY CALLS FOR AN INCARNATION

Now, as we have already indicated, the very evolution theory itself requires that the necessary means for attaining that highest stage or plane should be available. But that implies a self-revelation of God. Therefore, as we have said, the evolution theory itself calls for such a self-revelation.

Here is a process, beginning with the simplest mere life in a single cell. That life, by continually reaching upward and making the best of all the opportunities and facilities within its reach, has evolved and developed till it has reached a stage where it has a most highly organized and adaptable body, and a mind of wonderful grasp and ability. At that stage it finds for its body, or on the physical side, facilities for all kinds of nourishment, besides tools and appliances to elevate its condition, and on the mental side a whole universe of the most intricate and interesting knowledge to draw it out and exalt its powers. And not only so but facilities furnished, sometimes in the most remarkable way, to make that knowledge available to its use.

When it comes to the third side, or man's capacity for personal intercourse and fellowship, we find that man has made wonderful advance and that human fellowship and personal intercourse have come to be in many cases most noble and elevating things. But man has not reached the limit of possibility in this respect. He is both capable of and would be immensely uplifted by fellowship and personal intercourse with higher and nobler personalities than exist among mankind. Certainly in God's infinite person there could be afforded to man an intercourse and fellowship of the highest kind, and as he would begin to engage in that fellowship it would react upon his own nature, making him fit for and capable of still higher and higher kinds and degrees of fellowship, while always in God's person there

would ever be more than sufficient to afford the highest kind of fellowship that he would ever become capable of engaging in. It is plain that here is the path of man's highest and noblest progress. Certainly it would not be a break or a violation of God's great plan of evolution if He has also made provision for this highest advance, as He so completely and wonderfully has for all the other steps of the advance.

Fellowship is one of those terms that we instinctively understand better than we can define. It includes not only an exchange of thoughts and ideas, but also a feeling of interest, sympathy and affection, of comradeship and companionship, a feeling of need for or delight in the presence of each other. It means not simply the intellectual knowledge that these qualities exist in some one, but the actual active exercise of these qualities by two persons mutually towards each other.

God can therefore afford men the opportunity of this kind of fellowship and intercourse with Himself only by doing the kind of acts that are appropriate to such intercourse. It must be a self-revelation of Himself, and not in a passive sense only but in an active sense, by doing the acts appropriate to those feelings and relations. All the so-called "supernatural acts" would in some degree be a contribution to this, but we can hardly conceive how He could fulfill the conditions of such a fellowship more fully and effectively than by becoming a man and going through the whole range of human experi-

ences in the closest company and affectionate intimate association with other men, just as He is recorded as having done in the history of Jesus Christ in the Bible. Such an act would be in the highest degree reasonable and in perfect accord with the whole course of evolution, provided, of course, only that it was possible, a question which we shall consider later and find to it, I believe, a decidedly affirmative reply.

As to the question whether it is an object of sufficient importance that God might think it worth while and worth the effort it would cost Him, we need have no particular doubt. To God no act is a matter of difficulty or distasteful effort. Anything He wishes for is an object worth while, and the difficulty of securing it or the greatness of the act necessary is not a deterrent consideration in any degree, provided, of course, that it does not interfere with the attainment of some more valuable object, for nothing is difficult with God. We may well consider, too, that one such noble being, as would be eventually evolved through this fellowship and intercourse with God, would be more valuable in God's estimation than a whole universe of mere dead revolving worlds, and God's plan contemplates the production of not one only, but countless myriads of such high and noble beings.

IF GOD IS LOVE HE WOULD DO IT

I may add one more consideration of another nature. Not only does the evolution theory and the

rational course of nature call for some such revelation of Himself by God as would afford to man the possibility of fellowship and personal intercourse, since the necessary means for all desirable evolutionary advance have always been furnished, but its necessity is also certified by considerations drawn from an entirely different quarter.

We may postulate in the first place that such intercourse would be a great benefit to man, and also that it would be possible for God to do this to afford the opportunity of such intercourse and fellowship. Now among the moral sentiments that have some way come to have an established place in men's minds is the conviction that "to love one's neighbour as one's self" is one of the highest of moral standards. In the estimation of all the best of men that is a standard that all men ought to aim at. Anything less than that is less than moral perfection.

Now we cannot conceive of God as exhibiting anything less than moral perfection. But if, without really any serious detriment to Himself, He might afford to men something that would be of such enormous benefit to them, and should entirely and permanently decline to do it, He would be acting in a way that would be far below this standard of moral perfection. This is not saying that God is under obligation to do this or that act, or even that He is obliged to act according to a standard of moral right. It is merely saying that as a fact His character and acts do correspond perfectly to the highest

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standard of moral right, and in this case to conform to that standard would imply doing this for man which would be of such enormous benefit to him. And therefore we can say with perfect certainty that God would do it, because God always does what corresponds to that standard. For this reason also then we see that God from His very nature must make a self-revelation to man in such a case. Certainly the historic Jesus Christ was a person of such a character that He would have done that much for mankind if He had been able. If God would not have been willing to do it and Jesus Christ was not God He was a being with a higher moral character than that of God. If moral character is the greatest thing in existence then Jesus Christ must have been either God or a being greater than God. But He was not and could not be higher than God, for God's moral character is perfect. God would do and did do just that which He knew would bring the greatest benefit to men, by revealing Himself in the closest personal relations to men, and that God so revealed was precisely the Jesus Christ of Bible history.

TRUE PURPOSE OF THE INCARNATION

The fourth objection noted was that the force of Christ's example as an inspiration to other men would be greater if He was only a mere man like the rest of us and not a supernatural or divine being. This objection has already been quite fully answered in what has been said above. If the main object of

God revealing Himself in human form was to set a perfect pattern before men, not only would that have been a thing that could have been far better accomplished in other ways, but it would be plausibly charged as a "special intervention" or violation of the continuity of evolution. But that was not the main purpose of the incarnation. It was an important benefit which we obtain through that incarnation, but it was not the producing cause of that incarnation.

A much higher and greater object is the "salvation from sin" which the Bible teaches that we have obtained through that coming and the suffering of the Son of God. Yet even that cannot be considered the primary cause and object of God becoming man. It is much more nearly so than the mere teaching or setting a perfect pattern. But as we have already seen it was the self-revealing itself that was the real object and purpose of God, a purpose which He would certainly have carried out in the ordinary course of the evolution progress because it was an integral and necessary part of that progress just as much as any other part of it. It was not sin that brought Him into the world. It only caused the suffering and death when He did come.

Viewed in its deepest and truest meaning I think we will find that the whole transaction holds a remarkable analogy to all the rest of the common steps in the evolution. It is a mistake to suppose that the whole race or the whole of any species has steadily advanced or even shown a tendency to ad-

vance. The tendency has been merely to "variation," that is, to variation in every direction,—variation downward and to things that would produce deterioration or prevent progress, just as much, if not indeed far more, than variation in the useful direction. It is only at each stage *certain members* that have varied in the direction of progress. Or to express it otherwise, the path of evolution has at each stage afforded certain superior facilities to any that would vary in the direction to take advantage of them. From stage to stage certain individuals did vary in the exact way to take advantage of those superior facilities and so advanced. Other individuals, perhaps the vast majority, did not vary in the direction to be able to take advantage of those superior facilities and so did not advance. They varied in some other direction and so either perished or stagnated and became confined as a species at that particular level, or became side-tracked off into some other path of progress that led upward but did not lead towards the highest goal of man and what is beyond man. That is in a brief sentence the invariable experience at every stage or step upward.

It is precisely the experience at this stage. The next upward step in the evolution is a step to an improved and higher state of fellowship and personal intercourse. Sin is for the most part, if not entirely, error or wrong in the sphere of fellowship and personality. The scheme of evolution as God designed and is carrying it out affords at this point a greatly

superior opportunity in this very sphere of fellowship, as we have seen, namely, fellowship with God Himself. Some individuals make a variation in the direction that enables them to take advantage of that superior opportunity, and they do get its benefit and so do advance. Other individuals do not make the variation in that direction and so do not get that benefit and do not advance, or make variation in other and unfavourable directions and so go downward and perish. (See John xvii. 3: "This is eternal life, that they should know Thee the only true God and Him whom Thou didst send, even Jesus Christ.")

Such then is the real situation. The self-revelation of God, or the "Incarnation" is the real primal fact. It is an integral part of the one grand scheme of evolution, the one necessary prearranged means to enable men to make the next great step in the evolution up into fellowship with God. It was an event that must have occurred in any case, that the great universe progress might be brought to its goal and the object attained. It was only the sinfulness of men that made the event when it did occur such a matter of suffering and pain to the incarnate person. But that bearing of such pain and suffering but showed what the nature of God was, and always had been, namely, that He was quite willing to even bear such suffering for the sake of man's good and to obtain his fellowship, and also showed that God's fellowship with man in such a state of sin as he then was, or sinful man's fellowship with God, must neces-

sarily produce that suffering and pain to God. In other words that "Incarnation" was the sincerest act of complete fellowship, on God's part, including all that fellowship could be, and including the deliberate reception of all of pain and suffering that fellowship must entail. That was what God did as an act of fellowship, to lead men to take that highest step in the process of evolution, namely, "fellowship with God."

POSSIBILITY OF THE INCARNATION

We next come to the objections that are urged as to the possibility of God revealing Himself in human form. At first glance unquestionably these objections seem to be very plausible and weighty. There is such an infinite distance and disparity between man and God. Indeed when man reaches out his thoughts and imaginations to their farthest possible limits and contemplates this vast universe which is so large and wonderful that it staggers his very imagination to try to form any conception at all of it, and then thinks that God is so much greater than even all of this that He was able to create it all by a single wish or word it does seem a strange and impossible thought that so great a being should become such a little being as man is and for a time go through all the experiences of an ordinary man.

There are three main points, perhaps, that are made in the objection. 1st. The impossibility of one individual being two or three, or presenting such an

aspect of duality or Trinity as is supposed in this teaching of the incarnation.

2d. The impossibility of a being so great as God is revealing Himself in a form so small as the person of a man.

3d. The impossibility of the universe continuing if God had reduced Himself to a man, or in other words the question of God's relation to the universe during the time He was revealing Himself as a man, since we conceive that God is now and all the time in the most intimate contact and relation to every part of the universe.

It will be more convenient, however, in answering these objections not to take them up separately, but the considerations we shall urge will apply equally to all.

I think we shall find that each and all these objections arise out of a wrong conception of the nature of spirit and of personality. As it is just in this field that some of the most remarkable discoveries and demonstrations in the psychological science have been made in recent years it will be quite in place to reëxamine the whole subject in the light of the later conceptions which have been established.

What the common conception of personality and a soul has been is indicated by the etymological meaning of the word which is commonly used to express it,—“individual.” The soul or self was conceived as the most absolute sort of an indivisible unit. It was conceived that as far as extended magnitude was concerned the soul had absolutely no extension

or size but was an absolute point. So the ancient schoolmen used to discuss the question, "How many thousands of angels or spirits could stand on the point of the finest cambric needle?"

This conception was formed by a hasty and incorrect induction from the apparent mechanism of our ordinary thinking. Nothing seems more apparently certain than that I am a unit. Not only is my body one only, but it is the same "I" that sees, hears, feels, wills, remembers, and does all the other acts, and it is the same "I" that thought, perceived or acted an hour ago, half an hour ago and just now. This is considered as being a fact that we are directly and immediately conscious of, and as that is the most certain grade of knowledge we are capable of attaining, that fact must be true and incapable of being doubted. If, then, it is the same subject that has perceived a number of different things or thought a number of different thoughts, these acts could not have taken place in different parts or locations of an extended substance, say one of them take place in the hand and another in the eye several feet away, for that would be virtually the same as two different agents acting or perceiving. There must be some central agent to which all perceptions in the distant members are transmitted and from which all volitions emanate. What would be true of places as far apart as the hand and the eye would be just as true of places half as far apart or a hundredth part as far, or a millionth, in fact separated the millionth part of the breadth of an atom, or any most infinitesimal distance

at all. Therefore, it is concluded, this central agency, or the real "I," must be an absolute point, therefore absolutely indivisible and one.

Naturally all these conceptions and definitions are passed right over to the conception of God, since God is conceived as a spirit, having all the essential attributes that man's spirit has. It is true the doctrine of the omnipresence of God seems to be incompatible with such a conception, but that is simply set down as incomprehensible and the old conception still retained. It is on the foundation of some such conception of God's form or character that all the above objections to the possibility of one God existing as two or more persons are based.

NEW CONCEPTIONS AS TO PERSONALITY

Modern psychology approaches the question in an entirely different way, and instead of starting with a complete and infallible conception of what a spirit or person is, derived directly from consciousness, it first goes to work to collect the observed objective facts and phenomena bearing on the question, and from those facts and phenomena proceeds to determine the nature and characteristics of mind or personality, just as it would with any other object.

It is needless to say that the other method is entirely faulty and false logically. There is no logical connection at all between the unity of consciousness and limitation to a single point of space.

Considerations of space extension do not apply at all any more than weight, colour or any other quality. It would be just about as reasonable to claim that an act of thought must be black because it is not white or any other colour, as to claim it must be at an absolute point of space. It is applying attributes that do not inhere in it at all. It is equally illogical to argue from the unity of consciousness that the soul or conscious subject must necessarily be an indivisible unit. That does not logically follow at all. We can positively determine from consciousness nothing at all on that question. But so deep seated has become the belief of the absolute indivisibility of the human spirit that when the fact of human reproduction seems to give unquestionable evidence of its divisibility, the strange theory is invented that for each life a new soul is separately then and there created by the creator God.

Within the past few decades the new psychology has seriously taken up the matter of studying the nature and characteristics of the soul by the experimental method. Previous to that time experimental science had occupied itself almost exclusively in the investigation of material objects and motions. Any alleged fact or phenomenon which did not come under that class was either set aside as an illusion and fraud, or at least was rejected as not coming within the proper field of its investigations. But at length the conviction gained ground that science had no right to select and reject any facts of any kind whatsoever from its investigations. The result

has been the thorough investigation and study in the same way and spirit which has brought such marvellous results in the physical sphere of a vast range of facts and phenomena, some of them normal and some of them so exceedingly abnormal as to seem bordering upon the supernatural and miraculous.

We need not be surprised that some of the things thus discovered and scientifically proved are the direct opposite of the ordinary conceptions we have held as to the matters concerned. It is always so when science undertakes an exact and exhaustive investigation of any subject. Thus the discoveries of science wrought a complete revolution in our ideas of the nature and motions of the sun and stars, of the age and character of this earth, and of many other things. It will not be strange, then, if exact and exhaustive investigation should cause equally great revolution in our ideas as to some of the questions relating to the nature and characteristics of the soul.

One range of facts, exceedingly interesting and far reaching in its implications, and one that has long been under careful observation, is what is called "double consciousness" or "plural personality." While, of course, much mystery still remains, and we can by no means say that the matter is fully understood, yet enough has been fully demonstrated to prove incorrect our ordinary conception that unity of being must necessarily compel unity of consciousness.

I have given some notes on this subject in Appendix C, so will not go into any thorough presentation and discussion of the matter here. It is a well-known and recognized phenomenon, adequately described and discussed in many modern text-books of psychology. It is a state often met with in diseased subjects, and the same state can be readily produced experimentally in the psychologist's laboratory in perfectly healthy subjects. We may not yet fully know the underlying reasons or causes, but the facts themselves are of frequent occurrence and most thoroughly attested observation, and it is the facts themselves, not their underlying causes and explanations, that are of value to us here in this discussion. For we make no more claim to explain the ground of this appearance of plurality of person in the deity than in man. It is only the fact of such an *appearance* of plurality that we know in either case.

MULTIPLE PERSONALITY

There are several ways in which this multiple consciousness manifests itself, and several degrees and varieties of its manifestation. There are instances on record in which a person by some accident or disease lost all knowledge and consciousness of his past life, and began to learn and live all over again, in apparently the status of a new-born child just come into the world. This is the most simple and fundamental form of the phenomena. (See Appendix C.)

A next advance is where a person, having thus lost all consciousness of his past and begun a new life with a new consciousness, afterwards experienced a change by which all the knowledge he had previous to his former change came back into consciousness, and all the knowledge and experiences acquired since that time passed out of consciousness. He has taken up his life just where he left it at the accident or sickness, and all the subsequent interval is separated out just as much as if it had been lived by another individual. In many cases the two states have been known to alternate, and for days or months the knowledge and experiences of one state would be in his consciousness, and those of the second state be entirely absent, then for the next period of days or months the knowledge and experiences of the second state only would be in his consciousness, and all of the other state absent. As far as his consciousness is concerned it is precisely the same as though two different individuals were living his life, one living a term of days or months and then the other living a term of days or months, and then the first again living for another term, and so on alternately.

In the above cases the consciousnesses are mutually exclusive, and the person in one state has no knowledge of any of the consciousnesses of the other state. But there are other cases where the person has at one and the same time a knowledge of the content of both states of consciousness, and they seem to him to be the consciousnesses and experi-

ences of two different individuals. This is a phenomenon that is very often seen in insane persons. Insanity, however, is only the mind working abnormally, and its experiences show the capacities and character of the mind or soul just as truly as the experiences of the normal state.

There are cases of this simultaneous duality or plurality of consciousness in persons who in all other respects are adjudged to be entirely sane. In a recent case treated and published by a physician in Boston, and afterwards described in several of the popular magazines, the person concerned seemed to have four states, or four separate consciousnesses, or personalities. At least sometimes one of the personalities would seem not only to know of the existence of one or more of the others, but would know more or less of the things it had done, though as done by another person, would do things for its sake, either to assist it or to harass and distress it, precisely as one person would of another, and would have the feeling of rivalry, and that the other person or concrete of consciousness was trying to come into control as the dominant consciousness of the individual. In these and various other ways these different consciousnesses would feel and act towards each other precisely as different persons.

In the next place,—all these phenomena can be produced at will in the psychological laboratory by processes commonly classed under the name of hypnotism. A person can be made to seem to himself to be an entirely different person, to lose entirely all

his own knowledge and memories and the thoughts and acts of this period will only be remembered when he is again put into a similar hypnotic condition. The significance of this fact, I may say in passing, is to show that all these phenomena seen in abnormal or insane individuals are not excrescences in some way fastening themselves upon their minds or spirits, but are merely states or activities of the mind or spirit which they have always had the capacity for, since the equivalent phenomena can be produced at will in a normal mind under appropriate manipulation.

There is still one more stage to be described to complete the series. This would be cases where the two selves or apparent persons were present in the individual, both active and conscious at the same time but each unconscious of the other. It would naturally be difficult to identify or prove such a state if it actually existed. The two selves are often seen alternatively active and conscious but the difficulty is to demonstrate that the other self is conscious while the first is active, and especially to have them both active at the same time, while mutually unconscious of each other, since the activities must both be performed through the same body.

It can be accomplished, however, by means of automatic writing by an anæsthetic hand. In this case the normal self is entirely unconscious of any activity of the anæsthetic hand, and that hand is under the control and wielded by the secondary self.

The hand may be hidden by a screen from the eyes of the person so that he, in his normal self, is entirely unconscious of that hand or anything it does. The normal self may be engaged in conversation or any other occupation while the anæsthetic hand is made to do various things. It can be made to write things by appropriate stimulation, to correct in re-writing the spelling of words it has purposely been made to write wrongly, to compose and write long paragraphs or essays and to do other things which show not only automatic action but real reasoned action and consciousness. As far as it is possible to test, its actions are just as rational and just as independent of and unknown to the primary, normal self as though this hand belonged to some other man and that man were doing the things that it does. Here we have then the full phenomenon of one mind or soul acting simultaneously as two independent persons.

It is not necessary to discuss this matter fully for it is one of the well-known matters of modern psychologic study. Not that any satisfactory explanation has yet been made of all these facts, but this one result has ensued, namely, that the whole question of the nature and fundamental character of personality has become entirely an open question. The old idea that personality is just the soul's immediate consciousness of itself is no longer tenable. For any one now, as has so long been done, to object to the idea of one spiritual being existing in three separate persons in the "Trinity" as a scien-

tific impossibility and self-contradiction is merely to confess his ignorance of the modern psychology.

NOT AN EXPLANATION BUT A PARALLEL OF THE ALLEGED PLURALITY IN GOD'S MANIFESTATIONS

Now it does not at all follow that we must consider the relations between the "three persons in the divine Trinity" as the same as those between the primary and secondary consciousness in hypnotized persons, or between the divided personalities appearing in abnormal or diseased persons. We are not shut up to such a conclusion at all. We are dealing with an infinite subject which may have possibilities beyond and different from anything we have ever seen or conceived. What the above outlined psychological facts do establish is that all the current objections to the common doctrine of the Trinity are entirely unscientific. The current objection is that it is a contradiction in terms to consider three distinct persons having mutual relations with each other to be one and the same spiritual being,—one God. But that is not only possible, but often occurs in the actual experience of men. Two or more centres of consciousness can, and often do, appear in the same man, each having all the essential characteristics of a separate person, namely, consciousness, memory, reason, will, and the feeling of identity, and moreover they may both be active at the same time in the same body, one acting through one part and the other through other parts, each independent of and unconscious of the other, or may each control the

whole body at separate or alternate times. We may not be able to explain the mechanism of it, or even to conceive how it is possible, but of the fact there can be no question. To deny that the same unit of being or spirit can operate as two or more distinct persons, merely because we do not understand how it can do so, is now as unscientific as to deny that the self or spirit of the child can spring from that of its parents merely because we cannot in that case either explain the mechanism of it, or conceive how it is possible.

The knowledge of these facts as to the possibilities of the nature of spirit leaves the field open for any plausible explanation that any one may suggest, or for us to simply accept the declarations and record as revealing a credible fact, without attempting any explanation at all. God is an infinitely great Spirit. If so much is possible in the little spirit of man, surely equally much may be possible in the infinitely greater Spirit of God. The operations of man's spirit are, for the most part, confined to the narrow limit of space contained in his body while God's Spirit is present and operating throughout the whole expanse of infinite extension. If in the little, hampered, circumscribed space in which all man's operations are performed the different centres of consciousness, in which his one spirit is able to manifest itself, are able to sufficiently separate themselves from each other and exhibit such a degree of mutual independence and so fully the characteristics of being distinct persons, surely a spirit

operating throughout the infinite expanse of the whole universe might in some way be able to exhibit all the essential facts of two or more persons, mutually separate and distinct, and operating in different locations at the same time, and yet be fundamentally one and the same being, one unit, one entity, one God.

Looked at from this light, then, what are the details of the Bible doctrine of the Trinity, or rather, what are the Bible expressions and teachings that are interpreted into the forms of this doctrine? Briefly stated they are as follows: On the one hand there is insistence everywhere in the Bible on the unity of God, that He is one single being and there is but one God. On the other hand, especially in the New Testament, there are expressions used that imply plurality and mutual separateness. There is record there of a person appearing among men, associated with and seen by them, who is represented in the record and represents Himself to be a visible revelation of God. That person speaks of a person called by Him "the Father" to whom He speaks and prays and of whom He speaks as not only sending Him and helping Him, but also specifically as doing acts separate and distinct from His acts. He also speaks of a person, whom He calls "the Holy Spirit," whom He will send and whom the Father will send. At the same time He says "I and the Father are one." "He that hath seen Me hath seen the Father" and similar expressions. He also uses expressions that imply some such identity between

Himself and the "Holy Spirit." Also equivalent forms of expression are used by the other New Testament writers about these three persons.

From what we have already seen above of the nature of man's spirit and its possibility of acting and perceiving simultaneously through two or more mutually separate centres of consciousness, we need have not the slightest difficulty in conceiving that all these are manifestations of one and the same unit of being, one and the same spirit, the one God. The appearance of fully as much separateness of personality and consciousness and mutual objectivity of being and activity can be produced in a single man experimentally in the psychological laboratory, or found permanently in pathologically affected persons. And since, as we have seen, there are not only one but two different ways in which the one unit of being or spirit may become two or more persons in the case of man, namely, natural generation of a child and this multiple personality, in the case of the infinite God we are not shut up to suppose it must be either one of these ways but may be some way entirely different. Certainly we can say that all these forms of expression or teachings as to the nature and manifestations of God furnish no difficulties at all from the scientific point of view.

With the first difficulty removed of one being, God, existing as two or more persons, both the other objections noted above fall away of themselves. We have seen that the emergence of a so-called "person" with consciousness, will, memory, personal

identity and the like, is a function or activity of the spirit, not the real substance of the spirit itself, and there may be two or more such "persons" emerging as expressions or functions of one and the same spirit. There is therefore not anything to necessarily determine, as far as we know, what must be the capacity, or relative size, so to speak, of any one of those persons. If an infinite spirit wished to exhibit and exert himself in the form of a person, there certainly would be no limit on the upward side to his making that personality as great, capable and every way large, as he might wish. Just as truly there would be no limit in the other direction to his acting and exerting himself in another personality of any other dimension or capacity, as small as he might wish. This is quite self-evident when we come to realize that "personality" is not an expression meaning the totality of essence but merely a function or localized energizing of that essence. There would be no incongruity in an infinite being perceiving, appearing and acting in a personality the size and capacity of a man's personality more than in any other size, if that was the size best suited to his purpose.

As to the third objection; the infinite being appearing and acting in a certain place in a given small manifestation of personality would not affect in the slightest his simultaneous infinite immanence in and relations to the vast universe. Being present and active here in a given personality does not hinder his being present and active elsewhere in a

personality a million times greater or infinitely great.

It is no objection to this that we cannot explain the mechanism of how it can be. We cannot yet explain the mechanism of plural personality in man. We cannot fully explain the mechanism of personality itself. It is not strange that we cannot form a complete mental picture of how a being could be at the same time manifested here as a small, limited person, while at the same time also in infinite extension and power controlling all the vast universe. It is enough that our logic confidently confirms the reasonableness of it. We have observed facts of an equivalent nature, and so this cannot be impossible.

We need not at all attempt to go into a consideration of the preëxistence or the eternal existence of this Son of God, nor a discussion of the conception that as the "Second Person of the Trinity" and separate from the Father He was exerting infinite power in His functions of directing and controlling the universe at the same time that with limited consciousness and power He was going through the life of a man on earth. Those are all mere matters of detail which science has nothing to say about, and which it is for revelation and revelation alone to declare. Science, however, in demonstrating the main proposition has removed all possible scientific objection to these also. If there may be three centres of consciousness or three personalities in the same being in such a way that there may be the separate-ness ordinarily designated by the terms "Father,

Son and Holy Spirit," it is but a slight extension of the same principle to conceive that the one we call "the Son" might also present a further duality of consciousness by which He should be exerting His infinite knowledge and power in controlling and ruling the universe at the same time that in a special consciousness He was going through the life of a man, with limited knowledge, limited power and limited perceptions. And all the time it would be perfectly correct for that limited being to say He was the great being we call the Son of God, and to say He was then in heaven (John iii. 13) and had existed eternally.

TWO "NATURES" IN CHRIST

If we take up next the question of the "two natures" in the person of the Christ, which has often been the subject of much discussion, in the light of all we have just seen the question solves itself. Understood in the light of what we have just seen there is no question to solve.

In the older theology it was customary to speak of "two natures, which were united but not in any degree mixed," both possessed by the same person, almost as though a "nature" was a concrete something that a being could put on or off like a garment. Of course it was explained that that was not the meaning, and that it was a special use of the terms, and as a hypothetical or diagrammatic expression of the situation perhaps that was as good a definition as could be made from the standpoint of the old psychology.

But it is a great relief not to have to make such a mysterious and impossible definition and use of terms.

It is quite easy now to define that the "divine nature" of Christ means that the being who went through all the experiences recorded was in very truth the being who had existed from all eternity as divine, the Son of God. His "human nature" means that that being, in all those acts and experiences acted with the same measure and kind of consciousness as all common men, with the same degree and kind of knowledge, power, perception, sensation and in the same way in every respect as is common with all men.

We have already seen that on psychological grounds there is no obstacle to conceiving that the same being might exist everywhere as an infinite being using infinite power and knowledge in controlling the universe, and at the same time functionate through a special consciousness with limited power and knowledge. There is no putting on or off of a "nature." There is no change of attributes, but the one divine being merely does what it was always perfectly in accordance with his nature to do. How he could do it we can explain no more now than before, but we can say that a strikingly analogous thing is done often by men now, and can be caused to be done experimentally in the psychologist's laboratory. Namely, a man can, aside from his ordinary, living self and personality, live in another separate self and personality, in possession

of only the knowledge, abilities and characteristics that have been acquired during the life of that self or personality. That is a thing that is well known and fully attested as a phenomenon possible to men. We need not at all suppose that the infinite Son of God in becoming man did it in the identical way that man is observed to do it. But if man can do it we cannot doubt that it is possible for a greater spirit than man to do an analogous thing, in some way, whatever is most suitable to his desires and purposes. The method is not demonstrated but the possibility certainly is.

We may therefore conceive, when thinking of Jesus Christ, that in all His consciousness He was exactly on the plane of other men, that as a conscious personality He actually was a man in every respect, with no more knowledge than any other man might have had under the circumstances, and all that knowledge gained precisely as other men gain knowledge, and all His consciousness positively limited to that. All this, while at the same time He was the same identical being who created the universe and existed from eternity as the Son of God. It was not merely God uniting on to Himself a human body and human soul which He forced to go through certain experiences and sufferings. Nor was it a mere human soul that by some dispensation of God became exceedingly great and competent and was used by God as the instrument through which to reveal His character and effect His other purposes. It was the divine being Himself, just as

truly as I am the same being that existed and acted yesterday and a year ago. It was that divine being Himself that experienced all the experiences, felt all the sensations, originated all the impulses and in every way was the subject of all the life, and the death, which was there exhibited. That is the impression that is unquestionably given by the text of the record as it is given in the New Testament, and, as we have above shown, the latest discoveries of psychological science declare that that is not at all impossible or inconsistent with what we know of the possibilities of man's spirit and being.

II

MIRACLES

PREJUDICE

IT will be appropriate here in considering the person and life of Jesus to consider somewhat briefly the question of miracles. It must be freely admitted that apparently to the greater part of the scientific world the whole subject of miracles is decidedly unwelcome. It is the province of science to study natural laws. These natural laws are found everywhere uniformly working, and it is because of the universality and uniformity of the working of natural laws that it is possible to have any science at all. More than that, the further we investigate the more perfectly articulated and universally extensive we find the working of these natural laws to be. Not only have we had opened up through their means vast regions of knowledge that we had no conception of before, but large ranges of phenomena, which before were considered mysterious and assigned perhaps to supernatural agency, have been fully accounted for and given their appropriate place under the ordinary working of these same natural laws. It is only natural therefore that scientific men should wish and hope to bring all phenomena that exist or ever have existed under the explanation of this same agency, natural

law. So many times when accounts of seemingly mysterious facts have been investigated they have either been able to fully explain and classify them under natural causes, or else prove the reports false and fraudulent, that they not unnaturally believe the same can be done in all cases, and there never have been any facts that cannot be thus explained and classified.

As the result of this it has come to pass that not only in the scientific world, but in the religious world as well there has arisen a decidedly unfriendly feeling towards all accounts of the miraculous. There is a disposition to say as little as possible about miracles, to refrain entirely from appealing to them as proof of anything, and to at least wish that there were some way of entirely eliminating them from the Christian system and teaching.

On the other hand there are those who insist, and with good show of reason, that it is impossible to eliminate the miraculous from the Christian system without destroying the very foundations of the system. The history of Jesus Christ is characteristically the history of a miracle worker. The miraculous is not an accidental embellishment but it is the essential tone and groundwork of the picture.

FALSE DEFINITION OF MIRACLES

A great part of this hostility to miracles grows out of an entirely false definition and conception of what a miracle is. It is defined that a miracle is "a violation of the laws of nature," that it is something

that occurs "contrary to the laws of nature." If by "laws of nature" is merely meant the observed sequence of events,—the fact that things have been observed to happen in a certain order,—then it would be correct to call a miracle contrary to, or a violation of, the laws of nature. But with that definition we must also say that every event that has occurred but once or been observed but once is "contrary to the laws of nature."

It is more legitimate, however, to define "the laws of nature," not as the mere classified statement of observed appearances and sequences, but as indicating the powers or agencies behind those observed phenomena, whose essential nature it is to always act in a uniform and observed way. Thus, in this sense, by the "law of gravitation" we do not mean merely the observed phenomenon of bodies falling to the ground and the observed rate of their fall, but we mean the agency, whatever it is, which makes them fall, and whose nature it is to act always in a certain way. We do indeed use the term laws of nature with the former meaning as well as with the latter, but the two uses of the term are radically different, and it is a cause of great fallacy to confuse the two meanings. With the former definition it is no disparagement to say that a thing is "contrary to the laws of nature," for the world is and always has been full of things that in that sense are "contrary to the laws of nature." Every unique event, and everything that happens for the first time is in that sense "contrary to the laws of nature." And not

only so, but if Jesus or Paul raised the dead or healed sick people by a word more than once, that kind of acts, simply through the fact of their being performed and observed several times, become part of the laws of nature just as much as the rising of the sun or the falling of an apple to the ground.

The only sense in which there is any presumption against things happening "contrary to the laws of nature," is when the term is defined in the latter way. When by laws of nature we mean the agencies behind the events and producing them, which agencies we are constrained to believe, must always functionate in the one definite way which is their essence or nature. In this definition, when we say of an event that it is contrary to the laws of nature, we mean that it either occurred without any agency to produce it, or else that the agency that produced it in doing so acted contrary to the way it is its nature to act. There is the strongest presumption against anything happening contrary to the laws of nature in that definition.

For instance, suppose a man, for the first time, in working with an electric machine, observed two objects, showing a tendency not to move towards each other but to move away from each other. If that effect were produced by the same agency, which draws falling bodies to the ground and planets towards each other, it would properly be called a violation of the laws of nature, because that agency would be acting in a way contrary to what it is its nature to act and to the way in which it has acted in

all other cases, namely, repelling instead of attracting. So great would be the presumption against that occurring that he would say without hesitation that this was not produced by that agent but was produced by some other agency. Every event must be produced by some adequate agency, and it must be an agency that is definitely and precisely adapted to produce that event. We may notice, however, in passing, that we cannot say "an agent definitely adapted to produce that event and no other." We cannot say, *a priori*, that the same agent may not be adapted to produce any one of a number of diverse events. For instance, oxygen seems to have the power to make a great many different kinds of combinations with different substances, or even with the same substance.

CONTROL OF SPIRIT OVER PHYSICAL ENERGY

Another very great source of fallacy and error in considering this question is that most scientists prefer to limit their attention entirely to purely physical and mechanical agencies. But there is another kind of agency which we must take account of if we believe there is such a thing as volition, or mental control by men over their actions. We considered this matter to some extent above. (See p. 50 ff. and Appendix A.) While there is every reason to believe that all the activities of men's bodies of every kind are immediately the product of mechanical and physical agencies or energies, operating precisely in the way that it is their nature to operate, yet in the case of

many or all of them, there is another agency controlling those energies, and the acts would not have taken place at the time they did had there not been something done by that extra-physical agency, usually called the soul or life of the man.

It is a principle, then, that must be fully recognized and taken into account, that it is a property of spirit to control the activity of mechanical energy. This is just as much a part of "the laws of nature" as that gravitation attracts or heat expands bodies. That is simply the nature of that agency, which is one of the agencies operative in the universe. As to the quantity of energy that our spirit or will thus controls at any one time, it may be an exceedingly small amount in a single brain cell or possibly it may be much larger than we think, but in any case the amount is not significant. It is the principle that is all important, namely, that it is the nature of spirit to exert that control. A spirit sufficiently large might control any amount desired, and even by controlling the small amount that man's spirit is able to control, he is able indirectly to bring about almost any amount or kind of activity in any place and at any time that he chooses.

Now it is not true that all things in the whole course of the world's activities are determined by the natural working and interacting of physical energies alone and undirected.

For instance: a vast reef of rock in New York harbour, which under the ordinary operation of the mechanical forces and agencies of the world must

have lain there practically unchanged for millions of years, was one day suddenly shattered to pieces and afterwards all taken away, all as the result of activities which the agency called spirit had assembled and controlled for that very purpose. Now energy is an invisible entity, and we can conceive of a spirit so much larger than a man's spirit that it would be able to control directly and at once the full amount necessary to do that great act. Had it done so and assembled all the energy there without bringing any visible material with it, only just the bare energy, every one would consider, and properly consider, that it was one of the greatest miracles that had ever been recorded. And yet there would only be a little difference in details and no difference at all in principle from the way it actually was done a few years ago. It was all done by the agency called spirit controlling mechanical energy in such a way as to assemble the necessary amount of energy in the place necessary to do the work, and causing it all to act just at the time desired, none of which things would or could have happened as they did by the natural course of the working of the mechanical energies as they naturally would have operated. As a matter of fact, the spirit holding, and at its will discharging in the central brain cell the infinitesimal quantum of mechanical energy that starts each volitional act, is an operation the same in nature and only different in degree from the great miraculous discharge that we have above supposed.

Such a miracle or occurrence would be an adequate

type of the great majority of the miracles recorded in the Bible. All the miracles of healing, which form by far the largest part of all, are precisely of that character essentially. Nearly all sickness is the result of a wrong working of physical or mechanical energies, and to control and reverse those hurtful operations would restore the normal state and bring health. Any miracle causing death or destruction would be of the same character. Even a miracle restoring a dead man to life would only be the same with the addition of directive control over the departed spirit of the dead man. Even such great acts as occurred at the crossing of the Red Sea and the Jordan, and the falling of the walls of Jericho, which the record itself seems to indicate were events produced naturally by natural causes and merely timed so as to fulfill the desired and promised purpose,—yet if we should choose to consider them as produced immediately and directly without the operation of ordinary natural causes, they would not be at all different or more wonderful than the hypothetical miracle which we have supposed above, to remove “Hellgate rock” from the harbour, and which we have shown is not different in principle at all from what takes place every time we perform a volitional act. Such acts as walking on the water and stilling the tempest were wholly of that character, and the wonderful drafts of fishes were but special knowledge either with or without acts of the same character.

There remain one or two others, the multiplying the bread to feed the multitude and the changing

the water into wine, which seem to imply a control not only of energy but of material substance as well. Though man's spirit cannot, so far as we know, perform acts of the same nature as these yet it is not much to suppose that a spirit great enough to be in control of all the energies in the universe might some way also have the facilities for doing such things as these.

PHILOSOPHICAL OBJECTIONS

But after all the most serious objection to miracles in men's minds is not on the physical but on the moral and logical side. They say: It does not seem reasonable and in accord with God's character that He should work miracles. Of course He could but He would not and has not done so. They say in the first place: All the phenomena we have ever observed can be referred to natural, finite causes; those that seem to be otherwise are found on closer investigation to be either fraudulent tricks or else the cause is merely a little obscure but still finite and natural. Moreover the system of natural laws and natural causation is so marvellously extensive, adaptive and efficient that it is natural to expect it to furnish the explanation of everything that occurs, if we only understood it fully enough.

In the second place they say: It would be a mark of weakness in God to have to intervene to supply by special act something that was needed. So infinitely many needs have all been provided for naturally in the great scheme of natural causation

that it is hard to think that there are some few that have to be supplied by special acts. A perfect and infinite creator would have provided for these also as He did for all the others. It argues imperfection if there was still some remnant that could not be provided for in the first constitution of things and had to be supplied by a special act at a later time when the need developed.

In the third place they say: To use a marvellous and incomprehensible work as proof of a moral or religious truth is illogical and insincere. It might browbeat men's intelligence and force them to accept the dogma but it would be doing violence to man's reasonable nature and would not be legitimate proof at all, and utterly unworthy to be considered God's way of dealing with His reasonable creatures. For instance, suppose I say: "Man ought to tell the truth," or "Man ought to obey every selfish impulse of his nature," and immediately after saying it proceed to raise a dead man to life or call down fire from heaven. That might frighten men into believing both these propositions, but it would be no legitimate proof of either one of them. They each stand or fall according as there is legitimate, adequate, reasonable evidence bearing on the case, and the wonderful work that I had done would have no bearing on the case one way or the other.

PLACE IN THE EVOLUTION SCHEME

All these objections, however, grow out of a wrong conception of the reason and use of miracles.

They are not, in the first place, merely a sporadic and unclassifiable series of divine activities. They are not, in the second place, acts designed to make up some deficiency and supply some unforeseen or unavoidable need in the system of things. Nor are they, in the third place, primarily designed as the proof of moral or religious truths. They are facts which have just as regular and necessary a place in the framework of the great evolutionary system as any other fact in that system. They are as much a part of the scheme as designed from the beginning, and as necessary to the carrying out and completion of that scheme as the law of gravitation, or the human powers of memory and perception. They do not supply a defect, for no defect ever existed, but a fatal defect would have existed which would have cut short the whole progress of evolution if that system had not included and made provision for just these facts. They are all constituent parts of the one great perfect scheme as that scheme was perfectly conceived in the beginning and has been consistently carried out all through the ages.

In reality the one purpose of all miracles in the evolution system,—or in the divine economy, which is the same thing,—is to furnish acts of personal fellowship on the part of God towards men, so that they may be able to have a feeling of fellowship towards Him. The reason for them is the same as for acts of “revelation” and the incarnation already discussed, and their place in the evolution scheme is the same. They were, indeed, all acts which con-

ferred some benefit on some one, or taught some lesson, but the benefits and the lessons were logically secondary considerations.

The same considerations which were pointed out there apply here also. The next step in the evolutionary process is the development of a race of men,—or a new species,—living in conscious fellowship with God. This advance step can be taken, and men can be enabled to have that feeling and enter into that state only by God doing acts of a personal nature, such as these so-called miracles are. Instead, therefore, of its being a “break in the uniformity of nature” for God to do such acts, it would be a “break in the uniformity of nature,” and a defect in the evolution system, if He did not do them.

ALL PERSONAL INTERCOURSE MUST HAVE AN
EXTRA-PHYSICAL ELEMENT

Now from the standpoint of pure physical energy and laws, all fellowship or communication, even among men, must have what corresponds to a miraculous element. Indeed it is the miraculous, or extra-physical element in it, which constitutes it an act of fellowship or communication. For instance, I hear a noise in the darkness. Only as I know it could not have been produced by the wind or some other purely physical cause alone does it have value as a voice speaking to me. Or, I see what appears like signalling on a distant hill. To be of any value not only must those movements be the result of the volitions of some mind, but they must be of such

a character that I cannot doubt that they have been made by some man and could not have been produced by natural physical causes alone. It is only the evidence of extra-mechanical origin that gives them value as a communication.

The miraculous therefore was not merely an accident or accompaniment of God's self-revelation in Christ but it was an essential and necessary feature of it. From the standpoint of Jesus' own consciousness it is true that all His miracles were merely works of kindness, to help somebody, and that was the motive that prompted them. But yet it is equally true that in the great divine purpose of God they were distinctly designed to prove that He was divine, and that through and in Him God was offering fellowship with men. He refused, when asked by the Pharisees, to show a sign or miracle just to exhibit His divinity (Mark viii. 11, 12) and yet, to the messengers of John the Baptist and others He appealed to the testimony of His miracles (Matt. xi. 4, 5; cf. John v. 36; x. 37-38; xx. 30-31, etc.).

Yet the object was not to prove His divinity as a dogma, but to enable them to have the benefit that would come from consciously feeling in fellowship with a divine being and knowing that it was a divine being which was showing such love towards them as they saw in the fellowship of Jesus. Since the primary purpose of God appearing in the person of Jesus was to exhibit an act of fellowship towards men that they would feel to be such and be attracted by, it would have defeated the whole pur-

pose if He had not given such evidence that they could not only know but feel that it was really God.

In order, then, that the next advance in evolution may be made and men have conscious fellowship with God, there must be some act that not only is *but is clearly recognized by man to be, not produced by the ordinary course of nature* but a definite, intentional, volitional act of God intentionally directed towards the observer. It is essential that it be of such a character that it is recognized and felt by the observer to be a personal volitional act of God towards him. That is the essential thing that makes it a contribution towards fellowship. And that is precisely the feature in it that causes us to class it as a miracle.

Now of course it is true that there is fellowship between friend and friend when neither of them are doing or saying anything, but just enjoying each other's presence in silence. Some, perhaps, would say that that is the highest and most satisfactory kind of fellowship. But it must be borne in mind that there can be that kind of fellowship only if there has been in the past a long course of personal acts and words between them, and it is the memory, conscious or unconscious, of those past volitional acts that makes possible and is the ground of the present silent fellowship. Just so also in the case of God. It is not necessary or fitting that He should be always doing towards us these special, personal acts which we call miracles. It is sufficient that we have the

memory of such acts performed in the past and an assured conviction that He is near and present with us now. We have the memory, passed down from ancient times in the sacred record, and by various means we come to have, in what we call faith, the conviction that God is near and present with us, and that is what nourishes in our hearts the feeling of fellowship with Him.

It may, perhaps, be objected that, since God is the creator and director of all things, all things in nature are really His acts, and that ought to be sufficient. But the difficulty is they do not have the evidencing quality, and do not impress themselves upon our feelings as His personal acts towards us. That is an essential requisite to their having value as contributions to fellowship. The mere fact that a person had derived all his property and even his body and life from his parents, if he had never been conscious of any personal act by those parents towards himself, would not be sufficient to create within him a feeling of fellowship towards those parents. Even if it might possibly create a feeling of gratitude or esteem it could not create the feeling of fellowship. And the more so if those parents were near, present, in the house with him every day and yet never took any particular, personal notice of him, spoke any word personally to him or did any other act intentionally directed personally towards him. Such would be the relation between God and us if we knew that all the works of nature were His acts, but yet there were no other acts

of a more personal nature towards us. It would not be possible, under those circumstances, for us to make any advance towards a feeling of personal fellowship with Him.

III

PRAYER

OBJECTIONS

CLOSELY allied to the subject of miracles is the subject of prayer. The same persons who make objections to one make the same objections against the other. The same principles underlie both. A miracle is God communicating with men mediately through physical energies and appearances, while in prayer the communication is direct, without any such intermediary. For of course the true typical form of prayer is the silent prayer consisting only of thoughts or desires reaching out to God, and words have use only for crystalizing and making more definite the thoughts, or for enabling many to join in the same petitions or prayers led by one.

Thus considered science would declare the possibility of prayer a matter of course. Men do have such desires reaching out towards God, and if God is a being with all the faculties of man's spirit, and is everywhere present, there is no reason why He should not perceive and understand them, and also no reason why He might not convey His thoughts and desires to men in the same way, that is, provided we recognize telepathy as really proved to be an existing fact and faculty of spirit.

It is not to prayer considered in this aspect, however, that objection is usually made, but to specific answers to prayer, especially answers involving physical changes and results. Many persons would concede a benefit in prayer consisting of a sort of reflex influence upon the soul from standing consciously in the presence of God, or even concede that God might directly by His spirit exert some helpful influence upon the soul in answer to its prayer, but that He should in answer to prayer send rain or wealth or cure of sickness or anything of that physical nature they entirely deny as unreasonable. The reason for the denial is not that God could not do so but that He would not. The reason is based upon the supposed uniformity of nature, and the belief that God's own established order and government is so perfect that it does not need to be pieced out by the advice and interference of men. Any such power of men's wills to intrude and secure a change from the order that God originally arranged would be only an evil.

But this objection is based upon an entirely wrong definition of the place and purpose of prayer in the divine plan. If prayer were intended simply as a means for some certain favoured persons to get something they desired, it would be open to that objection. If the ultimate object and design of prayer was to arrange so that Christian people whom God wished to favour could have an easier time, be more prosperous and have more power than other people, so that they could have a means of getting

rid of evils and troubles, or even so that they should have an agency put into their hands for the uplifting and betterment of the world, it would be open to all the objections stated. We can hardly see how that could be reconciled with an all-wise God planning from the beginning the very best possible course of events. We can hardly conceive that to set aside the sequence of events that God has planned and substitute a sequence that some man has planned and desired could be anything else but detrimental. It would be absurd and unthinkable.

PRAYER ITSELF IS THE IMPORTANT END—
NAMELY, FELLOWSHIP

But that is not the fundamental and ultimate purpose of the institution of prayer at all. The things granted in answer to prayer are not the object of the institution of prayer at all. They are merely a means to a most worthy object. Indeed the whole process of asking and receiving is simply a means to bring about a high object. That object is the thing which as we have already seen constitutes the next great step in the evolution of man, namely, "fellowship with the supreme Spirit, God." The whole object of the institution of prayer is not to enable men to get things that they want, but to persuade men into engaging in fellowship with God. God never gives anything in answer to prayer except things He thinks and always has thought wise to be given, and which He would probably have

given anyway without prayer if the institution of prayer had not been established. But if it would have been good to give them anyway, much more is the result good when there is added the good results of the fellowship with God produced by the asking and receiving. It is simply the superior wisdom of God producing two good results instead of one. The thing given or done was a wise, beneficial thing that with common wisdom would have been included in the ordinary succession of things which were, as we say, to come about naturally. But in order to secure this higher benefit of divine fellowship, God's higher wisdom made the doing of that particular thing contingent on men's asking Him for it, that is to say, engaging in an act of fellowship with Him. While it is true that this may cause that some good things that otherwise would have been done are not done because men have failed to ask for them, yet the loss from that source is far less than the gain from the fellowship with God which is induced by the arrangement.

We may find a very homely but pertinent parallel illustration in men's treatment of animals, and though the illustration may seem belittling yet we must remember that the difference in rank between animals and men is infinitely less than between men and God. About the only way men know to tame and domesticate animals, that is to say, to bring them into a measure of fellowship with themselves, is precisely this same method of making some good gift to the animal contingent on its asking for it, or com-

ing into some contact with the man. When the farmer takes a vessel of corn or salt or other delicacy to the pasture with him to induce his farm animals to come fearlessly to him, it may be true that the shy ones that don't come fail to get something that would have been good for them, and it is certainly true that those that come by their coming get something they would not have gotten if they had not come, but still there was no violation there of the orderly laws of that farm's management. There is no putting of the will of a silly animal above the will and wisdom of the wise owner. It is not a makeshift to patch up a defect in the efficiency of the system of farm feeding. Nor is it necessarily a plan to enable certain favoured animals to live better than others and better than they could by the unaided working of the ordinary farm management. The one object is fellowship, or in common language to make those animals tame, friendly and not afraid of him.

Precisely such is the nature of the institution which we call prayer. Its object is to domesticate men to God's household, to induce them to voluntarily come to God without fear and engage in fellowship with Him. That praying men do get thereby good things they would not otherwise have gotten is true, but that benefit is entirely a secondary and subsidiary thing, it is not the main object; it is merely part of the means to attaining that object. And the main object is one which as we have seen is an integral part of the one grand, consistent prog-

ress of evolution, namely, the next step upward which men are just now in the process of taking. And moreover it is an object which, as far as our experience and observation teaches, is best attained that way, indeed could not be attained in any other way.

INTERFERENCE WITH THE COURSE OF NATURE

As to the objection that the theory of prayer is a contradiction to natural law because it makes certain events in the natural world contingent on the wishes and acts of men, while the creator in the beginning with infinite wisdom arranged the complete succession of natural events to follow in definite and necessary succession, the answer is that such is not the fact. Natural events do not all follow a naturally compelled succession, but some of them, indeed very many of them, are entirely contingent upon the wishes and acts of men. It was an event in the natural world entirely contingent upon the wishes and acts of men that the soil on certain hills and plains was turned up, loosened and pulverized and certain kinds of seed scattered there, and that was not any contradiction or violation of natural law or interference with a wise scheme of natural events determined from the beginning by the creator. No more would it be if we were to suppose the falling of a quantity of water on that prepared soil was entirely contingent upon the wishes and acts of men, either by the method of irrigation or of rain from the clouds in answer to prayer. It was entirely con-

tingent upon the wishes and acts of men that a great reef of rock in New York harbour at Hellgate was torn up and taken out of the sea, and it would be no more inconsistent with all the orderly working laws and compelled successions of nature if in response to the wishes and acts of men and in answer to prayer a mountain should be torn up and cast into the sea.

Whether or not any of that kind of acts do happen in answer to prayer is dependent entirely upon the judgment of God as to whether they are necessary in order to win men to fellowship,—how much coddling men need. And some men require a good deal of coddling to induce them to take any interest in God, and very great inducements to attract them voluntarily to come to Him. The question whether God can and does manipulate natural agencies after the prayer so as to bring about events in the physical world which would not have occurred by the ordinary operation of natural energies as previously constituted,—that is to say, whether God brings about by special act things that would not have happened naturally and spontaneously,—has already been considered under the topic of miracles. That He could goes without question. That He would depends entirely upon whether there were sufficient reason for doing so. When we consider that the one great object of the institution of prayer is to establish a feeling of the relation of fellowship with God in the hearts of men, it would seem as if, to accomplish that, there must necessarily be some

results occurring in answer to prayer that would not have otherwise naturally occurred, and which were specifically caused by God at that time. Certainly there must be in the minds of men the conviction that such occur in order that there may be the feeling that there is a real answer and so an act of fellowship. We can hardly conceive of God depending upon a deception to produce His most important change in the dispositions of men and win their confidence towards Him. Even though we might consider it admissible that many answers to prayer were really events prearranged from the beginning by God through a foreknowledge that the prayer would be made, yet the constitution of our minds is such that it demands that some at least should not be of that nature. In order to make a vivid impression of fellowship on our minds it would be necessary that at least some events were not events prearranged in the initial constitution of things, but were brought about by a special act of God after the request was made. If we were once fully assured of this it would thereby be quite possible for us to believe that other, and perhaps very many times more events happening in the ordinary course of things but in such a way as to fulfill our requests, were really consciously prearranged by God from the beginning with specific reference to fulfilling those requests and this would contribute to the feeling of fellowship.

There are two limits within which the number and character of such special acts would seem to be de-

terminated. They must be sufficiently numerous and conspicuous to keep vivid the feeling of a reality in God's personal response to our requests, and on the other hand they must not be so numerous or of such a kind as to impair our impression of the uniformity of the laws and successions of nature. For that is a necessity to our advance in knowledge, which is the other great line in which man's evolution is proceeding. For instance we might say,—since mental and moral changes in men are not usually the spontaneous results of physical causation but rather of the activity of mind upon mind, for God to produce this kind of changes by definite act after the request is made, would not be so apt to affect our conviction of the uniformity of natural law. For this reason we may conceive of a greater proportion of acts of that character being done in answer to prayer by a special act of God after the prayer was made, still not at all to the exclusion of acts of another character.

Really the proper attitude of mind in prayer to God is to definitely and personally lift upward towards God our every desire, whether it be in the mental, moral or purely physical field, and do it with the conviction that our so presenting our desires is a substantial part of the totality of contingencies whose product in the eternal mind is the future results.

IV

ATONEMENT

VARIOUS VIEWS

ONE of the most fundamental topics in Christian theology is the doctrine of the "atonement." It is based upon the interpretation of the death of Christ. The doctrine of the atonement is held in a great many different forms, and interpretations of the death of Jesus vary from, at the one extreme, those who have held that His death was a price paid to the devil to get him to release mankind from hell, to the other extreme of those who say that Jesus was an amiable but mistaken enthusiast who brought on His death by His impractical and revolutionary theories.

Somewhere between these extremes a line is drawn, —in different places by different persons,—dividing those conceptions which constitute His death an "atonement" from those which do not. Where there is so much difference of opinion it would be presumptuous to attempt an exact definition, but in a very general way we may say that to constitute it of the nature of an "atonement" that death must have had some peculiar relation to the lives, moral standing or future destiny of men. In other words that death was a necessity in order to man's salvation,—to man's highest welfare. This definition

would undoubtedly be considered entirely too weak and inadequate by many, but it is purposely put at a minimum,—the meaning was at least that much or more.

We may go perhaps a step farther and say that in most of what are called the "orthodox theories" that death is considered necessary to render possible the forgiveness of men's sins, and in many of them there is considered to have been some kind of a substitution or community of moral interests between men and Christ in such a sense that penalty due by men might be paid by Him, and merit due to Him might be rewarded by payment to them. Perhaps all these theories are open to the charge of trying to define too minutely with insufficient data, but in general something like the above is the complexion of the beliefs as to the significance of the death of Jesus the Christ which are held by the greater part of the Christian Church to-day.

The objections that are urged against these views, on professedly scientific or philosophical grounds, are quite numerous and varied. I may mention a few. 1st. There is no such thing as sin to be atoned or forgiven; there is only immaturity. Man has not yet arrived at his ideal towards which he is tending.

2d. There is sin, and its punishment is as inevitable as all the other laws of nature. Such a thing as "forgiveness of sin" is impossible.

3d. There is no need of anything to make forgiveness possible. God more than willingly forgives any man's sins for the mere asking.

4th. Every man is a moral unit. He must bear the good and bad merit of his acts himself alone. No other's acts can have any effect on his receiving the desert of his own acts.

Of course these objections are quite mutually contradictory, though perhaps not really so much so as on the surface they seem. There is one line of thought running through them all, and to which they are all related. They take account only of one element and ignore the judicial aspect. Any real evil results from acts are confined to the positively harmful effects of those acts, which of course are inevitable. God's relation to the whole matter is a placid impersonality, not in the least subject to feelings of insult and anger, and with a constant plan or tendency involving the betterment of man's condition.

CAN ONE MAN SUFFER FOR ANOTHER'S FAULTS?

The most common and confidently urged objection is that one man may not be punished for another's sins. Such an act would be unjust and itself a sin. There can never be forgiveness granted to one man on the ground of what some other person has done, for that would be an injustice towards both persons. It would be unjust towards the sinner, for it fails to give to him the punishment that ought to be given to him. It would be unjust towards the other person for it gives him punishment he does not deserve, or deprives him of reward he does deserve, giving it to another person.

However plausible this view may seem, and however admirable as a hypothetical system of morals, it has no scientific foundation. It is a view entirely based upon theory and sentimental considerations, while the conclusions indicated by an actual induction from the facts are all the other way. One man suffering for another's misdeeds is the common and universal experience of humanity, also one man rewarded through the good deeds of another. This applies not only directly and physically, but also indirectly and ethically. A man's station in life, his esteem by others and his esteem of himself is made higher or lower by the acts and character of persons intimately related to him, indeed his own character is made better or worse largely through the acts of others. If there is one truth that is beyond controversy through an induction from the facts it is "the solidarity of the race." The wrong acts of one member of the race pain or injure other members or all, just as surely as the mal-functioning of one organ in the body pains or injures other organs or the whole body. It is a pure theory built out of sentiment which claims that some time, some way, all these inequalities will be reversed and compensated,—an exact equivalent of punishment given to every person who has done wrong and a full compensation of extra pleasure given to every person who has suffered through another's wrong. However beautiful that scheme may seem, and however much we may wish it might be so, yet there is no ground in an induction from the facts that science can observe

to give any support to such a theory. It is one of the things that modern science most abhors, namely, first making an *a priori* theory and then seeking to force the facts into the mould of that theory. The theory must be built out of the facts, and in this case the facts are all the other way.

And yet, on the other hand, we may not deny the legitimacy of the idea of "punishment" entirely. That idea is too deeply rooted in our natures, and too universal to be entirely a delusion. The ideas of "ought" and of punishment and reward are most intimately connected and mutually imply each other. These ideas are the very foundation of all morals. The instinctive demand of our natures that certain kinds of acts ought or ought not to be done, and that the man who does certain things ought to be punished, is so deep and essential a part of ourselves that to declare it false would be to unsettle the whole working mechanism of our social lives.

LOVE CAUSES A UNITY AS FAR AS SUFFERING IS CONCERNED

There is one consideration we will do well to notice. It is quite possible for two persons to be so far identified that the pleasurable or painful acts experienced by the one in some degree also cause pleasure and pain in the other. Indeed this is one of the most common experiences of life. The basis of such a union and identification is love, it is "sympathy" in the etymological use of the term. If you love a person, any suffering that you know

that person to be enduring is also felt as suffering by you, and just in proportion to the relative degree of your love is the relative intensity of your suffering. In the same way anything that you know causes him happiness also causes you happiness. Theoretically, therefore, if two persons loved each other perfectly, and had perfect knowledge of each other's experiences, it would be entirely immaterial to which of the two an act of pleasure or pain were performed, for both would feel it equally. Or if only one of the two had the perfect knowledge of and love for the other, then at least he would feel equally with the other all the good or ill that came to that one, and it would make no difference in that respect to him whether the act producing pleasure or pain was done to that other or to him, he would feel it equally and the same in either case.

It will be noticed that we are approaching suggestively near to the status of a "vicarious suffering" here. At least it is evident that there could be no charge of injustice to the loving one if a suffering that might rightly have been inflicted on the one he loved was inflicted on him, for he would have felt the suffering equally in either case. And perhaps we might add that the advantage would be in favour of inflicting it on him, for in that case the suffering would be no greater to him than if it had been inflicted on the other and there would be with it a great joy that he was saving a loved one from that much suffering. This fact of love is a new factor which entirely changes the nature of the problem.

It is the happy solution of it all. For if the suffering is inflicted not on the one to whom it is naturally due but on the one who perfectly loves him then not only is that first one relieved of all suffering, but the one who loves him, while he receives an amount of suffering receives an exactly equal and compensating amount of pleasure in the fact of having saved a loved one from that much suffering. Thus, theoretically at least, we can conceive of the whole problem of salvation from punishment being in this way fully solved.

GENESIS OF THE INSTINCT OF GUILT AND PUNISHMENT

There is also a possibility of error coming into our conclusions on this subject through wrong conceptions as to the nature of right, duty, reward and punishment. We are perhaps inclined to consider these primary and fundamental facts. They are undoubtedly so in the sense of being of primary importance and fundamental in any scheme of successful life. But in their genesis they are not primary and fundamental. They are composite, artificial, manufactured products. They are instinctive feelings or judgments, it is true, but all instincts are manufactured products of very complex origin. We must know the composition or origins of things in order to determine perfectly their nature and possibilities. We would naturally be inclined to consider sugar and vinegar the complete opposites of each other, yet more complete knowledge tells us

that they are composed of precisely the same elements in different proportion, and one can be readily changed into the other. So we will be liable to err in our judgment of their relations and interactions if we consider sin, punishment, forgiveness and the like as primary elements. The motions of the hands on the face of the watch are all that the ordinary man ordinarily looks at, and it is because their movements are so simple and obvious that they are adapted to be an instantaneous guide to him at any time. But the watchmaker or watchmender must know accurately all the complicated interactions of the internal works that produce those simple, external movements. Just so, that they may be an instantaneous guide to us in every contingency, these moral judgments are made instinctive and very simple, but he who would make metaphysical arguments and theories about their possibilities must first know accurately the complex sources from which they are produced.

The ideas of "right," of "ought" and of punishment, while not identical, are mutually related and imply each other. It would not be in place here to attempt any thorough discussion of the question, but we may indicate very briefly what seems to be the path and method of their genesis. They all grow naturally and necessarily out of the fact of self-centred desire, that is, making the interests and advancement of self the dominant motive of life. Such desire seems to be part of the very elementary essence of personality or "self." It is chiefly as "a

permanency of desire " that self has consciousness of itself as self. There is an intake adjunct, namely, consciousness and its group of faculties, and an out-go adjunct, namely, will and the faculties of activity, but the most central fact, to which the other two stand in the rank of adjuncts, is this fact of desire, or a desiring entity.

Closely allied to desire, and springing out of it, is the feeling of possession. This naturally develops into a feeling of ownership in things I have, and by developing a little further becomes a general feeling of rights I possess as to a number of things. But man's mind has a tendency to generalize. I have this feeling of "my rights" and that certain acts will violate my rights and certain other acts be in harmony with them, and as I see other people constituted the same as I am and with the same feelings in this respect, I begin to generalize and perceive that there is such a thing in general as "rights" felt by men in general. This carries with it the idea of certain acts violating some one's rights and other acts being in harmony with them. This of course crystallizes into the more general idea that certain classes of acts violate rights and others are in harmony with them. This is already a rudimentary form of at least part of what we speak of as the idea of right and wrong.

As government arises and machinery for enforcing the rights of all more and more equably and impartially, this idea of right and wrong develops in content and character somewhat. Especially with the

idea of a supreme ruler, who both has rights himself and desires that the rights of all men be enforced impartially, the idea of right and wrong expands to its widest and most perfect form, as all embracing and perfectly discriminating, perfect justice to every creature, and perfect harmony with that ideal of perfectness which is God's purpose and objective endeavour. This, it will be noticed, is not the idea of "ought" but simply the idea of "right," and it will be seen that it is based on and grows out of that fundamental fact of desire, which is the elementary essence of personality.

In a somewhat similar way the idea of punishment grows out of this same fact of desire. There spontaneously arises a feeling of displeasure when desire is thwarted or interfered with, or an undesired experience is forced upon the individual. This develops into the impulse to inflict an equivalent undesirable experience or pain upon the individual that injured me.

Again the tendency of man's mind to generalize comes into play, and we feel not only that there is an impulse to injure the one that injures me, but as all other individuals are seen to have the feeling also, the fact of a general impulse to inflict injury in return for an injury received is accepted as a natural and appropriate state. As sketched in a previous paragraph, this would develop into the feeling that it was a right and therefore that it was right. With the emergence of competent government, however, especially with the belief in a supreme ruler, there

comes more and more the feeling that the inflicting of that suffering upon the wrong-doer is not only an impulse of the injured individual but is right and is a proper function of the government, and of the supreme ruler, God.

Here we must notice a peculiar result of man's tendency to generalize. He not only forms general and abstract conceptions, but he tends to *view himself objectively*,—to stand himself up in line with all other men and to view them all, himself included, impartially and alike. Here is the answer to that perplexing question why men should have that impulse which demands that suffering be inflicted upon themselves for the evil they have done. It seems natural that they should have an impulse for the inflicting of suffering on other persons for wrongs done, whether the wrongs were done to themselves or not. Here we can see that this tendency to look at themselves objectively must make them pass the same judgment, and have the same impulse towards themselves as towards any other. We call that impulse "conscience." When it comes to carrying out that impulse and inflicting the suffering, of course their self-centred desire to have pleasure and avoid pain will come in to fight against that impulse and prevent the infliction, but the impulse is there all the same. That is the only point of significance here.

It will be evident, I think, that the union of this emotional impulse for punishment to all wrong-doers, including self, with that other ideal conception

of the rightness and wrongness of acts, produces precisely the state of mind which we commonly denominate by "ought" or the "categorical imperative." We have, therefore, all these ideas of right, ought, punishment, etc., as natural fruit and results growing necessarily out of self-seeking desire being the central, dominant characteristic of our nature.

Is this idea of the natural genesis of conscience antagonistic to the common claim that conscience is the voice of God speaking in our souls? Not at all. Indeed, on our theory of evolution, it distinctly confirms that claim. All the existing process of evolution is specifically the will of God. It is just God progressively working. All those tendencies, therefore, that lead in the direction in which the evolution is tending are definitely designed and instigated by God. The very fact therefore that this great creative evolutionary process has stamped this instinct into our natures as a guiding, compelling force constitutes it His instrument for leading us to do the things that He wants us to do. It is therefore in the truest sense His will and voice speaking within us. We must get rid of the crude "Carpenter theory" idea that if a thing is naturally produced it is not God's work.

Does it, again, divorce morality from the authority and command of God? Not at all. Even though all these moral distinctions and impulses arose naturally in the process of evolution they are none the less the commands of God. For the whole process

of evolution is the will of God, and whatever impels in the direction in which that process is tending is the command of God in the most real sense.

MEANING AND GROUNDS OF "FORGIVENESS OF SIN"

We have therefore the three categories of ethics, —right, ought and punishment,—all natural products of the legitimate working of that self-centred desiring which is the natural, elementary essence of personality or self. They are the natural, legitimate product of that desire reacting and acting in the environment of other selves. They are not an extrinsic something tacked on to man at a certain stage to secure a desired result, as a shipping tag is pasted on to a parcel to insure its going to its destination. They are a natural development of what was in man's own constitution, namely, that self-centred desiring that is a main element of his personality.

Now it is evident that this instinct in its highest form, the ideas of right and ought and the impulse for punishment to one's own self for wrong-doing, cannot emerge till creatures have reached a very high stage in the evolution, that is till they have acquired reason and very considerably advanced powers of generalization. Moreover, if at any time this self-centred desiring should cease to exist, or to have the dominant place in man's being, all this instinct and feeling, especially the impulse for punishment, must die out and cease, since it is built upon and grows out of that self-centred desiring. The

idea of right, and a modified form of the idea of "ought," might remain as a useful guide, finding roots and motive in that which had now become the dominant factor of his being, but the impulse for punishment, having nothing to sustain it, must wither and die. There would thus be set off a certain limited period only, in the long process of evolution, during which the impulse for punishment in its present form could exist, and, indeed, as we shall see later, during which alone it would be useful to the process of evolution.

What then is the meaning of forgiveness? We use the term commonly in a merely conventional sense to indicate a certain word spoken or a relation of complaisance restored, but is there not some real fact corresponding to the term as substantial and well grounded as the facts of duty or sin? I suppose we would say that it is a state just the opposite of that in which a man is when he has done an act of the kind which we denominate bad, or wrong. It is the removal of that which that act brought upon him. This definition, however, would include too much. There are physical and other results of the bad act which are not removed by it. Leaving out all these effects that are genetically produced by the bad act there is in addition a recognized state in which the man stands, which calls for evil or suffering to be experienced by him. Punishment ought to be inflicted on him. Forgiveness means that he no longer stands in that state. It is no longer true that punishment ought to be inflicted upon him.

Now how can this change of state be brought about? In the first place we may say that it is not brought about by God changing His mind. All conceptions based upon the idea that God is angry, provoked or His dignity insulted and that is the reason that He imposes a penalty, which as an act of forbearance He consents to forego thus giving forgiveness, we may set aside as not calling for special consideration. The state in which man stands is a fact growing necessarily out of the existing condition of things, and he can cease to stand in that state only by the facts in the case being changed, that is to say, the condition of things being changed.

Let us suppose there is a race of beings in which the dominant element of their nature instead of being self-centred desire is love,—in whom all that part of the mental mechanism which with common men consists of desire for their own welfare and happiness is replaced by desire for the welfare and happiness of others. It is plain that among such a race of beings the instinct for punishment could not develop. There would be nothing in the make-up of their natures to give rise to such a desire or instinct. In like manner, should the human race evolve or change to such a condition the instinct of punishment must atrophy and die out, as all organs do that cease to have any use.

It is evident, too, that in such a race the inflicting of punishment would serve no useful end and contribute nothing, for the desire for the protection, welfare and happiness of all others is already the domi-

nant element in every one's desires, so any other expedient would be unnecessary. Moreover the inflicting of punishment on one who had done an injury would bring only suffering not only to him but to all the rest also.

By all the canons of evolution, therefore, the instinct of punishment could not exist in such a race any more than gills could persist in a race of creatures that had left the water and lived constantly in the air.

We have already noted that whatever evolution produces is the "will of God," for evolution is simply God's method of working out His purposes. So to say that evolution no longer produced the instinct of punishment would be equivalent to saying that it was not the will of God. Moreover since God is perfect love, His own nature would furnish no demand for it when it ceased to be a beneficial factor.

For the race to advance to that plane of life must therefore be the complete abolition of the whole institution of punishment for all the race. In the same way if some part of the race attained that plane, provided they were completely segregated and isolated from the rest of the race, punishment would be obsolete for that part of the race.

A NEW BIOLOGICAL SPECIES

Now precisely that is what is contemplated in the Biblical teaching as to salvation and forgiveness. There is everywhere claimed to be a radical line of demarkation,—a racial difference,—between those persons whose sins are forgiven, to whom some

such name as "children of God" is given, and the rest of the race, which is commonly spoken of as "the world." Evolutionally speaking they are treated as a separate biological species. They are considered to be distinct even in this life, and it is declared that in the future life they shall be in entirely distinct worlds, impassibly separated from each other. And one of the chief features that differentiate them is precisely this fact of love as the dominant factor of their natures. (See 1 John iii. 14, iv. 7, etc.)

Such a radical change in their nature as we have outlined, the most fundamental and all-controlling impulse of self-seeking being replaced by an equal impulse for seeking the advancement of others, would surely constitute as great a difference as ordinarily separates between one biological species and another. True now they are very imperfectly up to that plane of having love the dominating motive in their character, yet the change has already taken place that initiates them into the new departure, and the process will progressively go on till at some time in the future it will be perfect. God looks at every subject from the standpoint of His completed purpose, and looking at this part of the race from the standpoint of what they are to be at that time, there could be no utility in punishment and no impulse for it. And so God considers all those who, though still imperfect, are within that new species, as no longer under the régime of punishment. Translated into common language that is the same as what we call "forgiveness of sins."

I am aware that it is quite common to consider punishment in a different light,—in a sort of commercial way, as a debt that, by some mysterious higher law which even God cannot alter, must certainly be paid if ever once incurred. But since we are considering these problems specifically from the view-point of science, evolution, at least, can find no data for such a view, and if the account given above of the genesis of the instinct be true, punishment can have no place in the ethics of a race in which love is the dominant impulse of the character. Philosophy may solve the problems of its own producing, but as far as evolutionary science is concerned, it can clearly recognize and justify the necessity and divine sanction of punishment for all common men, and also its entire abrogation for all the individuals who have come into this new species, this new race of “children of God.”

We must notice, however, that they must be changed in order for this to apply to them. They must become members of this new species. A change must take place at the very springs of their being, initiating a new disposition that shall grow and develop until eventually love must become the dominating impulse of their character, taking entirely the place of selfish desire. In other words, in Bible language, “They must be born again.” It is represented that this takes place, under God’s spirit, chiefly as an effect of the infinite love of God, which was exhibited in the death of Jesus Christ.

We may add a few words on the subject of the

need of punishment and its contribution to evolutionary advance. In a race where a desire for self is the supreme and dominant motive, punishment, or suffering following the interference with the desires of others, is about the only agency that can bring about that degree of fair play and equality of opportunity between all the members that will allow the higher faculties to evolve, that is to say other faculties aside from those that contribute to making the individual an efficient fighting agent. In the lower reaches of evolution when the chief desideratum was physical development we may conceive that it would not serve a useful purpose for suffering to be inflicted for an act of injury to another, but rather the reverse. But when beings have evolved of such a grade that the most important line of development is the development of the contemplative, reflective, æsthetic and other faculties that do not contribute much to the fighting power of the individual, then there comes to be great value in this instinct of punishment,—the conviction that an act of injury to another ought to be followed by suffering inflicted on the wrong-doer. When, however, beings have advanced still farther, to the stage where love and desire for the happiness of others, instead of desire for self, becomes the dominant element in their character, then the instinct of punishment becomes no longer useful, for this element of love will be a perfectly competent agency in securing the highest possible opportunities for all. It will be just as potent and fit an agency in securing the advance of

all the "not-self" as desire was in securing the advance of self.

Thus we see that the instinct of punishment is only useful in a short section of the evolutionary process, namely, between the point where the distinctly human emerges and the point where the being has risen to that higher condition where love is the dominant motive. But in that short section it is extremely useful and essential. For all individuals who remain in that section and do not advance beyond it it is still valid. But for those who have advanced to that next stage it is not in force. It will be noticed that this agrees exactly to a Bible statement made to persons who are counted as having advanced to that stage: "Ye are not under the law but under grace" (Rom. vi. 14).

V

MEANING OF THE DEATH OF CHRIST

WHAT then is the relation of the death of Christ to all this question? In the Bible teaching a peculiar importance seems to be given to the death. It is compared to those religious acts in the Old Testament services, where a lamb or other animal being slaughtered and burnt upon the altar the priests declared forgiveness of sin to the offerer. The death of Christ is declared to be the great reality, of which those sacrifices of animals in Old Testament times were only imitations or suggestive pictures.

While in many ways this idea seems to be very appropriate and suggestive, yet followed too far in certain directions it seems to lead to very untenable conclusions. If we consider that the Jews and Pilate putting Christ to death was like the priest putting the lamb to death, that becomes a great religious act. Though the greatest crime of history it was the greatest and holiest act of all history and the one that brought the greatest blessings to the world. It seems utterly contrary to all our ideas of morality that the greatest of crimes should bring the greatest benefit to men, and that that great benefit

could not be brought without the committing of that great crime.

DEATH NOT CAUSED BY THE WOUNDS OF THE CROSS

We must first examine still further what were the exact historical facts and the nature of that death as indicated in the Bible record. He died upon a cross put there by the Roman soldiers at the instigation of the Jews. That much is without question. But it has often been remarked that while He died upon the cross yet the wounds and pain of the cross were not what killed Him. As far as the act of the Jews was concerned it was an act of murder, for it was intended to take His life and it would certainly have taken His life in the end, but in reality it seems that before that act had time to bring about His death it was brought about by another cause.

The time that He hung upon the cross was not sufficient to cause death ordinarily. It was but six hours and ordinarily one or two days at least would intervene before death. Ordinarily death would come with utter exhaustion, but He cried out with a loud voice at the time of His death. It has been claimed by some scientists that the apparent mixture of water and blood that came from the spear wound in His side after His death indicated some lesion or internal disorder that might have resulted from extremely intense suffering and emotion. Moreover only a few hours before, in the garden of Gethsemane, He had experienced an extremely intense emotional suffering that cannot possibly be at-

tributed to mere fear of the physical pain of death, in view of all His previous and subsequent attitude towards that death. It would seem as though it might have been the same agency that caused this extreme suffering that caused His death and also the peculiar physical conditions that were found after His death. It would seem also to have been of an emotional rather than of a physical nature.

Acting upon this suggestion the older theologians were accustomed to say that what caused the suffering and the death was "the wrath of God" poured upon Him, or some mystical, mysterious act of laying the sins of men upon Him. From what we know both of the nature of God and of the nature of sin we cannot conceive of such things being done in a literal sense. At best it can be no more than a figurative use of terms. Is there not something more concrete and real to be found, which science could recognize as a natural and probable cause of all these effects?

REAL CAUSE WAS SUFFERING OF LOVE FOR SINFUL MEN

There is such an agency, which in its natural and inevitable working must in those particular circumstances have produced precisely such results as are there recorded. That agency is *love*, the perfect love of God. It is not difficult to see that a person loving all men, and each and every individual man, with a perfect and absorbing love, coming to realize the extreme depravity and ruin of these persons that

He so intensely loved would experience an intensity of suffering that might produce extreme physical disorder and finally death.

Now all these conditions, so far as we can judge, were actually present here. Jesus did have a supreme and absorbing love for men, and for each individual man. If He was, in His elemental essence, a manifestation of God, and God is love, He also must have had perfect love as God has. Everything in His history goes to bear out that supposition that the supreme element in His nature was an absorbing love for men. On the hypothesis which we have here been following, though divine in His ultimate essence, yet both in His consciousness and His powers He was limited to the measure of humanity. From the first, with such a love, the depravity and corruption of the people with whom He came in contact, and whom He loved thus, must have weighed upon Him like a load of pain. But His acquaintance and consciousness were limited, and He was moreover buoyed up by the hopes and by the very exertions of His great attempt to win, reform and uplift them. For we must remember that all His life was just as real to Him as our lives are to us. There was no mere stage-play about it, or merely going through a prescribed program, for He was in every essential respect in His experiences, sensations and consciousness the same as any one of us, only with this feeling of supreme, absorbing love towards every one He associated with.

But in the end that weight of pain became too

great for the measure of human strength to bear. Just what it was that precipitated the final catastrophe we perhaps may not fully explain in all its details, but we can see enough of the inevitable working of such a love and its consequent suffering to conceive how in its natural working it might have produced that death just as it is recorded to have occurred. It is characteristic of emotional feeling to come not by steady, gradual increase but in waves of intense feeling, both preceded and followed by calmer periods. There seem to be hints of such emotional waves at various points throughout the history, as for instance when He had to spend whole nights on the mountains alone in prayer, when He was specially said to be moved with compassion for the people and earnest in healing them, at the resurrection of Lazarus (John xi. 35, 38), on the last journey to Jerusalem (Mark x. 32), etc. As the end drew nearer and He realized more and more definitely that all His efforts to reform these people whom He loved were failing and they were becoming worse than before, the load of pain became too heavy to be borne.

The last hours before the end came were such a saturnalia of hate and utter wickedness as the world has seldom seen. Remember that He loved every man in that vast mob that was howling for His life with a perfect love,—had the same feelings towards each one of them that a father has towards his favourite but wayward son. When at last He hung utterly helpless on the cross and saw all around Him

these men that He had so long loved and tried to help and now could do no more for them,—saw them wallowing in their sin and blasphemy as they stood laughing, taunting and cursing and glorying in their fiendish work,—no wonder the pressure of grief became too great for human capacity to sustain, and His great heart broke. For it is not an unknown thing in this world for such grief to kill. We have seen many a father's or mother's hair whiten and their heads bowed down to a premature grave solely through the pangs of sorrow for a loved but wayward son. And that was a love for only one, though deep yet short of perfect. His was a love perfect and all absorbing, and it was not for one only but for one and another and another, for many scores and hundreds whom He loved, but who with curses and hate were there flaunting their fiendish wickedness before His very eyes.

Surely there is no need to seek for other causes for His death when we know that that cause was present and operating. No need to seek for other causes for a man's death when we see him fallen into the midst of a furnace of fire. If Jesus' nature was such as we have assumed, of perfect and absorbing love for all with whom He came in contact, with no mixture of selfishness, such certainly must have been His feelings during those last experiences which He was compelled to go through. It is doubtless hard for us to believe it, and impossible to realize or form a mental picture of it, because in all our experiences, even our very highest and

purest love, there is still so much adulteration of self, and the very basal element of our natures is desire for self so that we can form no imagination from experience of what the feeling of perfect love would be. But our reason tells us that such must be the working of a perfect love, and no human power would be able to sustain life, with a perfect love, in the experiences that Jesus went through.

It was loving wicked men so much, then, that caused His death. And love means entering as fully into all the feelings and experiences of the loved one as if they were one's own. That is the very essence of love, its definition from one point of view. In the most real and literal sense, therefore, the sins of men were laid upon Jesus. He took upon Him our sins and suffered for our sins, and died for our sins, since it was the suffering of our sins that killed Him. We find, indeed, that the very language of the Biblical assertions was fulfilled in a far more literal and realistic sense than even the older theologians interpreted. Not merely in the sense of fulfilling a necessary judicial formality, or condition, not by some mysterious and mystical process in the mind of the moral governor, not in any indirect, figurative or merely formal sense at all, but in the most real, literal and actual sense He bore the load of other men's sins, and suffered and died as the result of it, for that was what killed Him.

As we have noted above, we may not be able to fully interpret all the details of those last scenes. It may not be easy to see the full meaning and cause

of the specially intense agony in the garden just before He was betrayed. We may be perfectly sure, however, that it was not caused by fear of the physical suffering of His death. All His other acts prove that beyond a doubt. It was indeed a dread of some very great evil that was impending and a prayer that it might be avoided. That great evil which He dreaded, however, was not the physical sufferings of His own body upon the cross but the crime and guilt of the persons who were going to put Him there. For if His nature was pure and perfect love that must have been far more suffering to Him than His own physical pain. He well knew the nature of these men, His countrymen, and knew that the process of seizing Him and bringing Him to trial and to death would open the flood-gates of passion and hate, stir up the very depths of hell within them and lead them to commit the greatest crime of history. And He loved every one of those men. Was there not some way that this terrible riot of sin and crime could be avoided? The end of His public career had come. Even death, He probably realized, was inevitable. But was there not some way in which He could come even to death if it must be, and yet this bitter cup of sin and crime and utter ruin to so many loved ones be avoided? Such a request would not be an unreasonable one, and such a desire and explanation of His agony would fully agree with all the other circumstances of the case.

I have said we may not fully know and under-

stand all the details of this most wonderful occasion. Just as all through His public life He was often, under the direction of the Spirit, enabled or led to bring into use the superhuman and divine powers for certain suitable purposes,—healing the sick and the like,—so it is not impossible that there might have been something of a similar nature here, and His consciousness specially opened for a time beyond the limits of the ordinary human to know and feel the sins and sorrows of a much wider circle of men than those He had actually met, or even perhaps of the whole world. And it might have been this, with its resulting intensity of pity and suffering, that accounted for His greatest agony and final death.

NOT THE ACT BUT THE LOVE THAT IT REPRESENTED
CHIEFLY SIGNIFICANT

However we are not limited to such a theory in order to bring Him into contact with all our sins and needs. For it was not the single act which took place within the short compass of a few hours of time that had significance in relation to our salvation. That was indeed but the exhibition in the form suited to the limits of man's comprehension of a great eternal fact.

It is the great eternal fact, not the limited and temporary exhibition of it, which has significance in relation to man's salvation. That fact is the infinite love of God, or translated into other language it means that all man's good is felt as pleasure by God, and all man's sin and suffering is felt as suffering by

God. It was not any mysterious quantitative or qualitative value in the sufferings of Christ upon the cross, but because this great fact of God's love and His suffering with all the sufferings of men lay behind it, and that suffering on the cross was just a little glimpse of the suffering of God for man's sins, exhibited in finite dimensions and human form and surroundings, so that we would be able to appreciate and feel it.

CHRIST'S FINITE MAGNITUDE FIRST MADE IT
POSSIBLE TO SEE SIGNS OF GOD'S
SUFFERING IN LOVE

There was, however, most important reason and use for this temporary exhibition of God's love and suffering in human form. There was most important reason and use in its effect upon us, upon our relations to one another and to God, bringing us into that position and condition in which, as we have seen above, the instinct of punishment may rightly and safely be discarded. One of the necessary requirements of that position and condition we saw to be love ruling as the dominant element in the character, that is to say, either that state actually existing or, at least, some change accomplished that would eventually produce that state. At least one of the great objects of that exhibition of God's suffering in human form was to produce that state in men. Love is preëminently a social faculty, not only in its operation but also in its genesis. It is by seeing this great exhibition of love towards us that men

come to have that feeling of attachment and devotion towards God which changes their character and eventually makes love the dominating factor. It was this exhibition of the love of God through the person of Jesus Christ that became the efficient cause capable of changing men and lifting them up to a higher level or a new species in which it is possible to pass over their sins without punishment.

We must remember, moreover, that this temporary exhibition of love and suffering in the person of Jesus Christ cannot be divorced from the great eternal fact of God's continual love and suffering with men. They are one and the same fact. That love and suffering was not a thing resolved upon for a certain time, and when that time came begun, carried through and finished, and being altogether ended now remaining only as a historical fact to look back upon. That suffering through love by God continues now just the same as then and has existed just the same from the beginning. It was only that at that particular time it was for a short time made apparent in such a form that we could see and feel it. Light from the sun at night is streaming constantly through all parts of space but only where a moon or a planet comes to reflect it does it become so that we can see and know it. So the appearance in human form, in Galilee and on the cross, was only a means to make that love and suffering visible to us, but the love and suffering have been from the beginning and are now an eternal fact. And it is the fact of the love and suffering of God that makes

feasible the passing over of sins without punishment for all those who are in the peculiar relation which is brought about by seeing and appreciating that love and suffering.

The suffering and death of Jesus Christ, then, was not an isolated, independent fact, arbitrarily determined upon by God, and specially brought about by specially bringing into existence just at that time a number of special conditions and agencies specifically and exclusively designed to produce that suffering and death, that suffering and death having some peculiar quality and value by which it changed the feeling, or at least the attitude of God towards men, and led Him to forgive their sins. On the contrary the attitude of God towards men was the same from first to last, from eternity to the present moment, and that suffering unto death of Jesus was the result of that one constant attitude of God, or rather it was itself that attitude of God, appearing in human conditions so that we could comprehend it. And it is only because that suffering unto death is thus the real expression, the actual appearing of the constant attitude of God towards man that it has such significance in relation to the forgiveness of sins. It is not because God has been changed, but because He is what He is, and what that death and suffering show Him to be, that sin is forgiven.

If the question is asked, "Would not forgiveness of sin have resulted anyway from the very character of God if Christ had not died?" the answer is that that is an impossible contingency. God being what

He is it is just as impossible for that appearing, suffering and dying not to have taken place as it would be for heat not to radiate from fire in a cold room. It is precisely because that suffering unto death of Christ is the inevitable expression of the nature of God that it has its significance.

BIBLE EXPRESSIONS AS TO THE ATONEMENT

If it be asked, How does this conception agree with the expressions in the Bible itself with regard to the atonement, we must notice in the first place that the references to the atonement and death of Christ in the Bible are never made from the standpoint of metaphysics and analytical explanation, but are chiefly hortatory, from the emotional standpoint, designed to influence men's conduct. In the second place we must bear in mind the marked fondness of all Hebrew speech for figurative and symbolic language, often even drawing the terminology from some feature of the conceived figure which is not strictly applicable. (Notice, for instance, such passages as 1 Kings xix. 17 or xxi. 24, where it is the general picture rather than the detail cited which is true.) In the third place it is inevitable, in describing acts of God, that we use some symbolism drawn from human acts, which can only partially be applicable.

Truth is many sided, and the meaning of a fact may not be exhausted by a single aspect of it. I think it will be found that this conception would fit the conditions of any of the various theories of the

atonement, whichever one it may be judged that the Bible really teaches,—the theory of vicarious substitution, the so-called “governmental theory,” the “moral influence theory” or any other. These all concern questions merely of judicial relations, with which science has nothing to do. It only treats of the fact as a fact. Viewed thus this interpretation of the fact is quite in accord with all the Bible references and allusions to it.

We could not better characterize the Bible statements as to the death of Christ than to say they represent it as corresponding to the sacrifices offered on the altar for sins in the Old Testament religious ceremonies. As it is commonly expressed, they were the type of which His death was the fulfillment, they were the pictures of which it was the reality. This cannot mean, however, that the Old Testament worshipper, in offering his slain lamb on the altar, really knew that some time Christ was to die upon the cross, and consciously presented the lamb with the thought of its resemblance to that occurrence. It means rather that the circumstances of the case, and the thoughts his sacrifice was adapted to arouse in his mind, were similar to those in the case of Christ's death. That is precisely what we find.

There were three great facts pictured or suggested by those old sacrifices. First, the great law of retribution,—that sin brings suffering and death. This is symbolically pictured by the death of the lamb. It is also literally fulfilled by the death of Christ, for our sins did cause His death. Secondly,

it was not the sinner but another, namely, the lamb, that was made to suffer there. This also was literally fulfilled, since it was not the sinner but Christ that died, by suffering over the sinfulness of men. Third, after the offering it was declared by the priest and recognized by the sinner that he would not have to bear suffering for his sins. This also is true of all that are connected with Christ. Though there were other subordinate details, such as the leading of a scapegoat far off into the wilderness, the disposition of the blood, the burning of the flesh, and other things, all of which had their use in making impressions on the minds of a simple and childlike people, yet the essential facts were the three stated above, all of which had their full counterpart in the case of the death of Christ.

There are no mere formalities or make-believes in God's workings. There are declarative acts, but they all grow out of great realities which lie behind them and of which they are the expression. Christ did not die bearing our sins, merely in the sense that God chose to accept in that light a death that came upon Him from a natural cause. He really died from and through our sins in the most literal sense, just as literally as we might say that a man died from a fever. It was bearing in sympathy the load of our sins, bearing by the identifying power of love the shame and degradation of those sins, that caused His death. In what fuller sense could we say that retribution of our sins was borne by Him, and His life was sacrificed by it?

THE SUPREME FACT IS THE LOVE OF GOD

And notice, too, that we are free from liability to suffering or punishment, not through some fictitious meaning that is declaratively attributed by God to that death, but by what that death was in its inmost essence, by the great fact of which it was but the conspicuous expression. It was not, indeed, any qualitative or quantitative value in the nerve sensations or physical sufferings. No physical act ever has in itself any ethical value. It has ethical standing only as the externalization of some mental or emotional state which lies behind it and of which it is the expression. It is the mental fact alone that has ethical significance and value. So it was the mental fact of a love so great as to cause such suffering and death over our sins that is the one fact of supreme value in this transaction. It is the "God so loved the world" that is the real significant fact, and it contains and transcends all the details which result from it.

It has been sometimes said that for God or a special divinely sustained and constituted person to endure a physical suffering, instead of having more virtue would have really far less virtue than for some weaker being to consent to receive it. But it was not the being willing to receive that suffering that has main significance. What is significant is that God had *such great love that it produced that suffering*.

Nor is our freedom from liability to punishment

something that is merely formally declared by God. It is so formally declared, but it also is a fact, that has its roots in a sufficient state or condition. By becoming united to Christ persons become members of an order of beings in whose economy, from the nature of the case, punishment has no place. There is neither need nor demand for it. And they are so because a basal change has taken place at the springs of their life which constitutes them a new species, with a different life and character eventually emerging. They are "born again." Instead of the old self of ego-centred desire, a new, dominating, central motive, love, has been at least planted in them as a germinating plant that shall eventually grow and expand till it dominates the whole nature.

And the death,—and life,—of Christ brought them into that condition, not only formally and declaratively but efficiently, by producing the change in them that transforms them into the nature characteristic of this new species in which punishment is obsolete. Only life can beget life, and love also begets love. It was that vivid exhibition of the love of God which planted the seed of that dominating love in their hearts, which raises them to this new biological species.

For that was the one great reason of the incarnation,—and the passion was only a natural incident and inevitable consequence of the incarnation. It was simply to enable us to see, and so be influenced by, something that always existed in the nature of God. We only can see the love and gentler attri-

butes of infinite God, by having them exhibited through a small organism that will thrill and bend before emotions which the infinite greatness of God's personality bears with composure though He feels them just as much. The whole great world is circled and saturated with magnetism, but it takes the small bulk of the tiny magnetic needle to make its presence visible. God is bearing all the time a load of love and pain that would crush any man, but we would be unable to see any result of its activity till we see Him, in the person of Jesus Christ, attempting to bear it with the capacities of a man. All the flow of feelings that make no visible indication of their presence in the eternal calm of God's infinity, when flowing in the circumscribed smallness of a human personality become clearly evident. They show Him to be the tender, loving friend and suffering Saviour, draw all men unto Him and make them love and trust Him.

The process of our salvation is not an arbitrary expedient, or mysteriously conceived scheme, but something that grows naturally and necessarily out of the very nature of God. It is merely the inevitable expression of that nature, for "God is love," and "God so loved the world that He gave His only begotten Son, that whosoever believeth on Him should not perish but have everlasting life."

Appendix A

THE MIND

SIR OLIVER LODGE, in "Life and Matter," replying to Professor Haeckel's monistic theories in "The Riddle of the Universe," very conclusively shows that there is a province for life and mind activity entirely beyond and outside of the utmost that can be claimed or conceived as the activity of matter and force. He holds, just as we have stated in the text, that the activity of mind consists in the control and direction of energies. It is seen as guidance. This guidance is a fact that we must recognize, unless we are prepared to accept an extreme theory of fatalism, which not only abolishes all morality and human responsibility, but also falsifies the whole field of human consciousness.

It is interesting to notice that even Professor Haeckel and other extreme monists are beginning to recognize this, and to provide for it in their monistic systems by attaching some rudiments of mental acts and capacities to the material atoms, or to some other more ultimate substance that is conceived of to be the basis of both matter and energy. They then conceive that the high and complex activities seen as the thought processes of men are produced by syntheses or aggregations in some way of these atom mind rudiments.¹

Very well! For the purposes of our argument here that conception and explanation will serve as well as any other. We are only concerned to know that an agency such as the human mind exists, whatever its composition or genesis. If the mere fact of aggregation and articulation is capable of producing such a highly efficient agency of this nature in the human body, is it illogical to suppose that in the much greater and marvellously articulated

¹ Cf. Lodge's "Life and Matter," pp. 41, 97, 112, etc. Haeckel's "Riddle of the Universe," pp. 78-80, etc.

aggregate of the great universe, there may also be some similar synthesis into a unified agent of correspondingly great efficiency. Our argument has shown the necessity of the working of such an agency as the human spirit is in the control or starting of the present universe process, and here we would see, on this theory, that it is inherently probable that there would and must be such a supreme guiding agent from the very nature of the substance of which the universe is assumed to be composed.

If we held that theory we might go on to elaborate that it is impossible to conceive that the material attributes of the fundamental, basal essence "secrete" or create the mental attributes out of their own material substance. One must be just as essential and primitive as the other. The mental functions must be just as much an essential feature of that supposed primitive, basal substance as the material or the kinetic. There is no reasonableness in making the mental attributes an appendage to the material any more than in making the material an appendage to the mental, for both must be equally basal and primitive. If either, it would be more obvious to give preference to the mental, for its function is to dominate and control the material and energy. Certainly by this theory its place is established as one of the great primal constituent elements of the universe.

If that is true, and we remember that we are dealing with an absolutely infinite length of time in which any processes possible must have been progressing, if this mental constituent is capable of organizing into unified syntheses of such capable efficiency as we see in the human mind it is illogical to suppose that anything short of a synthesis of the totality in the whole universe would be the limit of possibility, and in an infinite space of time it is inconceivable that anything less than the highest possible perfection should be attained. We are therefore logically compelled to suppose a unified synthesis of all the mentality in the whole universe, exercising over every part of it the most perfect possible guidance and control. That is certainly a broad enough basis for any theistic concept, and it is precisely what we have, in the text, assumed as the basis and character of the evolution process.

But, as suggested in the text, the latest studies of the new psychology seem to make it more impossible to evade the recognition of mind as an entity independent of and detachable from matter. One of the most ludicrous blunders of one group of psychological investigators seems to have grown directly out of the fixed determination to find a genetic connection between all mental acts and some material substance. In one school of investigators in France it was firmly held for a long while that contact with different substances, different magnetic currents, or touching different parts of the body, would produce different species of thoughts in a hypnotized subject. It is almost pathetically amusing now to read the accounts these investigators give of the methods of their experiments. They seriously tell what kind of metal or wood they had used to produce a certain result, or where they had applied a magnet; and they give wise catalogues of what hypnotic acts will be produced by touching with a wooden rod, what kind require a brass rod or some other metal, some that are produced by a steel rod and not by an iron one, and the like. It has now been fully demonstrated that it is really mental suggestion that produces all the results in hypnotism, and that, in the experiments of these investigators from which they drew such strange conclusions, it was really some unnoticed suggestions made by the operators along with their use of the rods and magnets that produced the diversity of results.¹

When viewed in this light it is very significant what remarkable power suggestion, a purely mental act, can have over matter and material processes. Not only can pain and all the phenomena of fever, paralysis and various other diseases be produced merely by suggestion in hypnotized subjects but actual material, bodily changes can be produced in the same way. Professor Bernheim tells of one instance where he placed an ordinary postage stamp on the back of a patient, telling him that it was a fly-blister, and not only did the patient have the sensations but when it was removed an actual blister was found to have formed under its influence, through the suggestion given.

¹ Cf. "The Psychology of Suggestion," Sidis, pp. 80-85.

He relates other experiments where blood was made to actually exude from the skin by the same means. The experimenter traced the name of the patient on his forearm with a blunt object and then told him that at four o'clock he would go to sleep and his name would appear traced in blood. At the hour designated the man fell into a sleep and his name in red tracings appeared on his arm and some blood exuded with it.¹ Similar results have been obtained by other experimenters.² These are but extreme instances of the remarkable influence which the mind and purely mental causes are found to have over the body and its functions and diseases,—a subject which under the title of "Psycho-Therapeutics" is receiving a great amount of investigation at the present time.

Another kind of phenomena which lately has been receiving very searching investigation, and seems to yield more incontestible proofs along this line is what is commonly called "Telepathy" or "Direct Thought Transference." While we can by no means say that the discussions on the subject are closed, yet those competent experimenters and observers who have made the closest study of the subject are convinced that it is possible for one mind to convey impressions, sensations or thoughts to another mind at a distance, without physical means. It is only necessary to mention such names as Prof. Wm. James of Harvard, J. H. Hyslop of Columbia, Sir Oliver Lodge, Sir Wm. Crooks and scores of other scientists of the highest attainments and most competent judgment, who have fully satisfied themselves by their own experiments that direct thought transference without physical means is possible. In Appendix B I have given a little presentation of the subject, with a number of illustrations, to which the reader is referred at this point.

Some, perhaps, have seen some general external resemblance between direct thought transference at a distance and "Wireless Telegraphy." From this they may have imagined in a vague sort of a way that it might be possible to explain direct thought transference by some physical process as yet undiscovered. But the resem-

¹ Cf. Hudson's "Law of Psychic Phenomena," p. 153.

² Cf. Cutten, "The Psychological Phenomena of Christianity," pp. 81-87.

blance is entirely general and external and not of a character to give ground for any such expectation. Really it has no more significance in that respect than sight or hearing at a distance. Indeed not as much. The main principle of wireless telegraphy is a perfectly common and simple one. It is merely the transmission and reception of streams of vibration, precisely as sight and hearing are. The physical principle is perfectly simple. It is merely a problem of making apparatus able to send sufficiently strong vibrations or delicate enough to detect very faint ones. It really is more simple than sight or hearing, for it consists of one stream of homogenous vibrations, merely broken up by interruptions. There is no analogy at all between that and the problem of sending, or causing to be conceived at a distance, sensations, form, colour, words and even abstract thoughts, all with equal facility and in the same operation.

Besides it requires specifically adapted instruments both for sending and receiving in wireless telegraphy and in all other forms of physical transmission. For the comparatively easy forms of vibration concerned in sight and hearing it requires decidedly obvious and bulky instruments in the human organism. For this infinitely more difficult and delicate operation,—if it be a physical one,—we find absolutely no trace of any instrument at all in the human body. We know definitely many things concerning the mathematical laws and limitations of motion and energy, and are not at liberty to give our imaginations free rein for unlimited speculation.

In this way then, as well as in various other ways, science is finding things done in the world that cannot be accounted for by the operations of matter and energy, and thus is meeting the challenge which the materialists have,—unjustly,—thrown down, to furnish some evidence of the soul's existence which can be detected by their instruments of precision.

Whatever is the explanation of these strange occurrences and of these remarkable powers shown in these experiments where one mind is influenced by the thoughts of a distant mind, there is no known physical process that would be at all adapted to account for them, and it is impossible to conceive of any that would. Something is

done, therefore something must have done it. As all known material and physical processes would not be able to do it, the agent that did it must be something else, and as the phenomenon is purely mental or psychical the obvious and insistent answer is that it is done by some agency whose essence is of that character.

If in all ordinary cases of perceiving, willing and the like, the claim is made that there is an observed brain or nerve change in connection with every thought, and therefore we cannot be sure that there is any thinking agent other than the matter and energy in the brain, here is a case where something is done entirely without, and transcending the powers of matter and energy. Illogical as that objection is even in the former case, it cannot possibly be made here, and the whole force of the phenomenon goes to establish the reality of mind as a separate active entity,—of an agency that is not matter or energy but a third something whose characteristic activity is thought and control.

With this one unequivocal instance of the separate, independent working of a purely mental agency, added certainty is given to the claim that in all ordinary living activities, such as perceiving, thinking and willing, there is a separate, non-material entity, mind, acting. The proof is sufficiently compelling without it, for in all those cases there is an element of the phenomenon that is entirely alien to all the attributes of matter and energy, and so is proof of the existence of a third category. But to those who choose to ignore logic, and insist on "being shown," these and various other phenomena that are being discovered by the new psychology are bringing the demanded optical proof, and putting the proof of the existence of mind on the same plane as the proof of the existence of "argon" or of gravitation.

Appendix B

TELEPATHY

WE are not really compelled to demonstrate that "Telepathy" or thought transference without physical means actually takes place. It would be quite sufficient for our purposes here to show that, as Mr. Osgood Mason suggests: "Telepathy can no longer be classed with fads and fancies. If not already an accepted fact it has certainly attained to the dignity of a theory supported by both facts and experiments."¹ It would be satisfactory merely to be able to indicate that the idea of prophets receiving communications by a method similar to telepathy is not an absurdity to be rejected as contrary to science. Yet as we go on to inquire into the subject I think we will be surprised to see what a large amount of evidence there is that telepathy is really a proved fact.

It cannot indeed be said that all the body of scientists or psychologists accept telepathy as a proved fact. It is rather a suggestive circumstance, however, that most of those who refuse so to accept it take the ground that all the alleged evidence is of such a dubious and unreliable character that "It is not worthy of serious consideration." Almost none of them base their disbelief on a competent study of the accumulated evidence. When scientists of such world-wide reputation as the late Prof. William James of Harvard, one of the very foremost psychologists of this country, Sir Oliver Lodge, Sir Wm. Crooks and scores of others, after full examination and the most rigid tests that science can devise, have openly declared their belief that what is called "Telepathy" does occur, the position of those who pronounce its evidence "not worthy of consideration," and decline to investigate it at all is, to say the least, rather unfortunate.

¹ "Telepathy and the Subliminal Self," p. 309.

Human science and human thought seem to go through three stages. First is the credulous stage, second the sceptical stage, and third the conservatively constructive stage. In the first there is the childlike disposition to believe everything that is asserted. All kinds of marvels and fairy tales find quiet, undisturbed acceptance. In the second stage, having discovered the faculty of sceptical doubt, like a keen, bright new tool, men go around hacking it into everything. It is a callow, sophomoric state of mind, which thinks it is a mark of superior discrimination to be able to see reasons to doubt things which others believe. With more maturity comes the feeling of responsibility for constructive belief, a much more onerous and exacting situation than the previous one of facile scepticism.

What is true of human thought in general is specially true of that thought when it first comes to face some new field or department of belief. With regard to all this as yet rather obscure field of psychical facts it must be confessed that a considerable part of scientific thought is yet in this stage of simple scepticism, and contents itself if it can only find plausible excuse for continued doubt.

But scientific thought, to be really entitled to be called discriminating, must be equally discriminating on the positive as on the negative side, not only to see how far it is possible to maintain a plausible doubt, but rather to be able to detect the exact point at which, though doubt is still quite possible, yet there is sufficient evidence to properly warrant belief. The supreme aim of science is not merely to avoid error but to discover truth. The latter is a much more difficult and delicate operation than the former, and requires a much more robust and capable discrimination.

The evidence upon which those that believe in the occurrence of telepathy base their belief is both enormous in volume, varied in character and attested in many cases by all the criteria that are demanded in any scientific test. The evidence is not merely the strange tales of apparitions and hallucinations, but a large part of it consists in laboratory experiments, that can be repeated at will, and whose results are open to any one that will take the pains to repeat the experiments.

The literature of the subject is growing to be quite extensive. I will refer here briefly to a few sources where the subject is discussed more or less fully and where those who wish may find material for more satisfactory investigation. We may remark of one class of the evidence, which consists in reported experiences of a seemingly supernormal character, that though this is the portion of the evidence to which science would accord the least weight of credence, yet, as suggested by Mr. Podmore,—This kind of evidence, less convincing in itself, becomes much more significant when once we have seen one completely undoubtable case that fully demonstrates the fact of the occurrence of telepathy. For then it takes its place as one of the accredited ways of working of natural law, and reports of its occurrence must be accepted with no more evidence than would be sufficient for any other natural phenomenon. The effect is mutual. The one accepted case helps to validate and make credible all the other cases which seem more mysterious and weird, and the enormous number of such cases on record enables us to feel that this is not some strange, semi-miraculous thing that has happened to some one but it is a legitimate part of the natural working of the mind, and just as the "X-Ray," electricity or radium was really in existence and operative centuries before it was first discovered, so this is merely a new discovery of facts that have always existed.

The greatest single source for evidence along this line is found in the proceedings of the "Society for Psychical Research," founded about a quarter of a century ago, and with branches both in England and America. The work of this society, since it has often to do with occurrences which we have long been accustomed to class with "ghost stories," has naturally to overcome a great deal of scepticism, not to say prejudice, in the popular mind. But it is a mistake to think of them as a band of credulous wonder seekers. They are just the opposite. All the leaders are men of the highest acknowledged scientific attainments and training. Its methods are severely critical and its rules extremely strict, far more strict than justice would demand were there less scepticism to overcome.

For instance, one rule is that no medium or subject that

has ever been detected in any fraud shall thereafter ever be considered at all by the society. A recent case is the notorious medium, Eusapia Paladino. In spite of the fact that large numbers of results had been produced by her under conditions in which the most competent experts watching the case declared fraud to be impossible, yet when recently Professor Munsterberg in Boston once detected her attempting to make use of fraud to produce some result she was completely and permanently dropped from investigation by the society. Now the occasional resort to fraud is not necessarily proof that at other times results were not produced without fraud and by purely psychical means. Indeed under the circumstances it is not at all strange that fraud should be attempted when the genuine psychical means did not readily produce the wished-for results. I know a baby that has a whistle and is very fond of whistling on it and letting folks see that she can do so. But when for any reason the whistle fails to respond readily to her blowing she very often simulates with her mouth the sound of the whistling. For all that neither her parents nor disinterested friends feel compelled to think that she does not at other times really make the noise with the whistle. I express no opinion at all as to whether Eusapia Paladino's performances were or were not all fraudulent, but merely as a matter of the laws of evidence point out that it would not be strange, even if true results had often been produced by her by purely psychical means, if in some instances when the desired result did not readily appear the semi-conscious operator should attempt to produce the same result by other means.

And yet the society has done wisely in strictly enforcing this rule and dropping every subject as soon as any fraud appeared. For it wanted all its findings to be of the highest possible grade. The result of this extreme strictness in its methods is that anything that appears in its "Proceedings" with its endorsement is fully entitled to be received and credited. This does not include, of course, the theories and beliefs of all its members. Some have been unjustly inclined to distrust the society's work because, not unnaturally, many adherents of the religious cult of "spiritualism" are found among its members.

Whether or not we accept the theories and deductions of any of its members, it is only the facts that it certifies that we are interested in, and in that line it is a thoroughly credible witness.

The common reader, who will find the proceedings of the "Society for Psychical Research" rather tedious reading, will find more condensed reports of much of its work, as well as much other pertinent matter, in quite a number of recent books and magazine articles. One will find a very popular presentation and discussion of the whole subject in articles by Prof. J. H. Hyslop in the *Woman's Home Companion* for September and October, 1905. Professor Hyslop here presents and discusses quite a number of cases, attested by competent witnesses, which seem to give convincing proof of the power of one mind to impress its thoughts and feelings upon another mind at a distance, without physical means.

In some of the cases he refers to, persons in relations of the closest sympathy and affection, as for instance husband and wife, when one of them was affected by some intense sensation, even at a considerable distance, the other seemed to be affected by some similar sensation. A number of instances of this kind are given.

In other series of cases it is more definite information that seems to be conveyed in this strange manner. In one case a woman lying sick in a hospital tells that a brother who was a pilot was dying in the harbour, and it was later found out to be true. In another a girl declares that her father is struck by lightning and killed, and it is soon after found to be true. In another a Mrs. Lodge seems to see and read while on a journey a telegram sent to her, but which her husband has received, and she identifies it on her return. In another case a Mrs. Agnes Paquet seems to see her brother drowned in the harbour at Chicago, and soon after finds that it is true. In another a little girl, Lillie Spruit, tells her mother that her father, a sea captain, has been shipwrecked, and describes quite a number of rather peculiar details, all of which are afterwards found to be accurate. In another case the commander of a ship sailing in the Mediterranean seems to see a sort of vision of his brother being murdered somewhere in Europe, and sees a number of details of the

road, the place, the circumstances and the surroundings, with all of which he was so impressed that he wrote it down in the ship's log for the day. After he arrived in port he found out that the murder had occurred at just that time, and with all the circumstances which he had seen. In another case a mother sees a vision of her husband and son drowned in a fishing boat and her little son also at the same time seems to have had a somewhat similar vision, and it was soon afterwards found to be true. In another case both a father and son have at about the same time a vision of the boy's grandfather in circumstances that are soon after found to be true.

I will mention two other cases recounted here which are a little more complicated and remarkable. A Mr. S. R. Wilmot was on a voyage returning home, and the ship had experienced a severe and continued storm. One night during the storm, while in his berth in his stateroom, he had a vision or dream of his wife coming to the stateroom door, and seeing some one else in the room she hesitated a little, but afterwards came over to his berth and stooping over kissed him. He had a companion in the same room, and next morning his companion asked him who was the woman that came to his room and kissed him, and related all the particulars just as he had seen it, including the fact that she had hesitated a little before entering. When he got home his wife told him of a strange vision or dream that she had had a certain night, which corresponded with the very night in which he and his companion had seen the woman. She said that she seemed to have the impression of his being in trouble and had gone to him to the stateroom of his ship. When she got there she saw that there was another man in the upper berth of the room, and hesitated about going in, but afterwards went in and went to him and stooped down and kissed him. She remembered vividly the appearance of the room, and said that the upper berth sat back farther than the lower berth, which though unusual was actually true, for the room was in the extreme stern of the ship where the slant of the stern walls of the ship made the upper berth stand back farther than the lower.

The other incident is still more remarkable. A ship was sailing on a smooth sea, the captain on the bridge,

when the mate below looking through into the captain's room thought he saw a man at the captain's table writing. Going in he saw on the captain's slate the words written : "Steer to the northwest." This he asked the captain about, but he knew nothing about it, nor did any one else on the ship. It was a little out of their course, but as the weather was very favourable they decided to follow the directions and see what would occur. After sailing in that direction a few hours they found a ship in great distress and were able to rescue all on board from death. After they were on board, the rescued captain told them that he had had a strange experience. A man on board had had a trance and had told him that a ship would come to their rescue in just the way it had. When the mate saw this man he said he corresponded exactly to the man whom he had seen writing on the slate in the captain's room. Without telling any one he turned the slate over and had this man write on the other side the same words : "Steer to the northwest," and when afterwards examined the handwriting on the two sides of the slate were pronounced by all to be identical. This last case seems very strange and complicated, but even supposing there might have come to be some embellishments in the telling, there were so many witnesses that there must have been some foundation of strange facts in it that really occurred.

In *Harper's Magazine*, August, 1909 ("Psychical Research"), the distinguished scientist, Sir Oliver Lodge, gives quite an extended discussion of the subject, with numerous instances. With regard to the truth of telepathy, he says (p. 374), speaking of the work of the "Society for Psychical Research," "The first fact established by the society's labour was the reality of telepathy,—that is to say, of the apparently direct action of one mind on another by means unknown to science. That a thought or image or impression or emotion in the mind of one person can arouse a similar impression in the mind of another person sufficiently sympathetic and sufficiently at leisure to attend and record the impression, is now proved." And again (p. 376) discussing the various interpretations, spiritistic and otherwise, that are made of these various strange mediumistic

and apparition experiences, he says: "The first hypothesis that must be made, whenever normal explanations thoroughly break down, is that telepathy of some kind is occurring from some living mind."

H. Addington Bruce, in *The Outlook*, March 26, 1910 ("Spirits or Telepathy"), discusses a large number of facts that are put forward as proof of the activity of disembodied spirits. He is inclined to think that all those that are commonly classed as physical phenomena, such as "Table tipping," "Slate writing," "Levitations" and the like are not sufficiently free from the suspicion of fraud to have weight as evidence. Those cases where facts seem to be known to the medium or percipient which he has had no physical means of finding out about, he is inclined to think can all be accounted for by telepathic communication from the minds of living persons, which, with Sir Oliver Lodge, just quoted, he counts as the first hypothesis that must first be applied in such cases.

In *Current Literature*, Volume 46, p. 208 ff., Mr. Bruce discusses a large number of cases, and declares that: "It is certain that telepathy itself is an established fact." He even gives a number of instances to prove that a person can make an apparition of himself or of some other person appear to some person at a distance. He cited the case of Herr Wiserman, who claimed he had this power, and in one instance made good his claim by making the apparition of a certain lady long dead appear to a Lieutenant N—— and another man seated in their room in the barracks, as a test.

In *The Forum*, January, 1909 ("Thought Transference"), Sir Oliver Lodge also discusses the question with a number of instances. He refers to series of experiments conducted to test whether the mind of one man may be influenced by the sensations and mental states of another mind when there is no physical connection to convey such influence, and says that satisfactory results have been obtained pointing to the reality of such influence.

In *The Catholic World* for 1907-08, there is quite an extended series of articles by H. M. Searl, discussing the whole subject and recounting a large number of instan-

ces. The writer takes the position that telepathy is a legitimate explanation to be adopted wherever it will account for the facts.

Among the books on the subject I may mention "The Unknown," by Camille Flammarion. In this book he has collected a very large number of various different classes of instances of the mind acting at a distance without physical means, all of which he considers sufficiently well attested to be worthy of credence. In Chapter III he has collected 180 authenticated reports of cases where an apparition of a person appeared to some friend at the hour of his death, the friend being at a distance, and in many cases having no knowledge of the sickness or danger of the person concerned. In many of the cases the credibility of the witnesses seems to be entirely beyond question. Many circumstantial details are given in most of the instances. In Chapter VI he takes up the subject of willing a person at a distance to perform prescribed acts, and of mind reading at a distance. Of both these he gives numerous instances. While the instances in Chapter III must necessarily all be spontaneous apparitions merely recorded by those that had experienced them, in these cases it was mostly experimental work, where the conditions could largely be arranged beforehand and all possibility of fraud, error or illusion largely eliminated. Such cases manifestly would carry the greatest weight as evidence. In Chapters VII and VIII he takes up "Sleep" and numerous instances of persons in sleep having dreams or visions of things at a distance, which were afterwards ascertained to have actually occurred. If sleep is a condition of the same general nature as that produced in hypnotism, and if, as we shall see later, it is this hypnotic or secondary condition of the mind that is most susceptible to telepathy, there would be significance in such dreams as probably arising from telepathic activity of the mind.¹

Prof. William James, in "The Will to Believe," discusses a number of phases of this subject. He quotes from Mr. Edward Gurney's "Phantasms of the Living" in which there are given accounts of seven hundred cases

¹ See also "Mysterious Psychic Forces" by the same author.

of apparitions reported and investigated, a large number of which were "Viridical," that is to say some actual calamity had occurred at a distance at the time that the apparition appeared, and of which it seemed to be a reflection. A very significant thing which Professor James discusses and in which he assisted was what was called a "Census of Hallucinations," which was taken a few years ago. This was a questionnaire sent out to a very large number of persons for the purpose of testing in a systematic and scientific manner just how much place such strange apparitions have in human experience. In all answers were received from about 25,000 persons, about 17,000 of them being in England and about 7,000 in America. Special care was taken in sending out the questions to avoid specializing and to send the questions impartially to all classes of people, so that the results would be fairly accurate as a record of the comparative frequency with which men in general have such experiences.

The results showed that about *one in ten* had at some time in their lives had something of the nature of an apparition or abnormal vision of some kind. This in itself shows that such experiences, though difficult to explain, are not strange in the sense of being unusual or rare. These apparitions were of various kinds and of various degrees of significance. In a large number of cases there had been some corresponding distant event occurring at the time, of sufficient resemblance to constitute at least a noticeable coincidence. In quite a number of cases a death had occurred. Of these cases, sifting out all those concerning which there was any uncertainty, and taking only those that were beyond suspicion it was found that in one case out of forty-three a death had occurred on the same day that the apparition appeared. By the "law of averages," taking the number of days in the average human life, if it had all been merely chance coincidence, there would have been about one chance in 10,000 that a person's death would have occurred on the given day on which the person had an apparition of him, whereas in this test it was found to have so coincided in one out of every forty-three cases. This would seem to indicate that there was some causal

connection between the death of the person and the appearance of the apparition. It is not necessary, of course, to conclude that the disembodied spirit of the dead person had gone out and appeared to the other person. The commoner explanation would be that in the extreme intensity of the hour of approaching death there had been some kind of telepathic communication from the mind of the dying person that had given rise to the apparition seen by the mind of the other person.

Professor James for quite a while superintended and conducted experiments with the celebrated Mrs. Piper, a woman who seems to show the most remarkable power of revealing things that she has no physical means of finding out about. For a great many years now she has been in the hands of psychological experts and under their inspection, and has never been detected in any attempt at fraud, and indeed, as far as possible, it has been made impossible for any fraud to be used. And yet she is constantly doing the most remarkable things. Persons are presented to her,—in many cases entire strangers,—and without any leading remarks or suggestions from them she will relate intimate details of their past history, or of the history and circumstances of their friends and relatives. A great many other kinds of feats of a seemingly supernormal character are constantly being performed by her. Sometimes, for special tests, she will tell what some distant friend or relative of a person present is doing at the given time, when it is not known to any one present what that person is doing, and yet on later inquiry it is found out that her description agrees in a remarkable way with just what the person was doing at that identical time.

Like all other so-called "Mediums," Mrs. Piper supposes that some disembodied spirit is revealing these things to her and speaking through her. But as all those who are familiar with the phenomena of hypnotism are aware, the fact that she has such a sensation or conviction is not in itself proof that there is any such disembodied spirit concerned. That is one of the questions the psychologists are seeking to determine by the experiments. It would be evidence for it if the things she revealed were such that it would not be possible for her own mind, by

telepathy or some similar process, to find them out from the minds of living persons. Some observers have been satisfied that they could not have been so found out, and must have been communicated by disembodied spirits. Others have not been convinced that such was the case, and have taken the ground that it would be possible to account for them all through telepathic or clairvoyant action of the mind of Mrs. Piper or of other living persons.

While there was this difference of opinion among the observers as to the interpretation, as to the reality of the facts themselves there was none. Professor James himself declares that all who have seen these tests were convinced that some kind of supernormal powers of cognition were shown, and to his mind they carried decisive conviction that telepathy was a demonstrated fact. As he further suggests also, this one case, indisputably proven, establishes in general the possibility of telepathy as a proven fact. And if it is once fully admitted as an accepted fact all the hundreds and thousands of mysterious occurrences so often reported, which seem to imply the mind acting at a distance, would cease to seem miraculous or mysterious, and would all fall into place as natural, credible facts to be believed simply on the appropriate amount of testimony. We have simply done what has so often before been done by science,—discovered and catalogued a new agency of very wide application.

Another very interesting book is "Studies in Psychical Research," by Frank Podmore. One of the most suggestive parts of the book for our purpose is Chapter VII where he takes up the subject of "Experimental Thought Transference." While such experiments as those described above with Mrs. Piper would be more striking and compelling to the actual observers, yet science would perhaps consider even more convincing some of the experiments described here, because though less spectacular they are more analytically and technically exact. Of course all such experiments, arranged and conducted by experts under carefully guarded circumstances of their own constructing, are far more satisfactory than cases occurring spontaneously in ordinary life where the evidence depends upon the fallible memory of the subject of the ex-

perience and other observers. But as already indicated, these minute, technical experiments establish the principles and fact, and show that those other accounts are worthy of credence.

He describes a number of series of different kinds of experiments or tests. In one series the "Percipient" or subject of the test was blindfolded and securely cut off from all physical means of perception, and then made to guess the character of various things that the experimenters presented for the purpose. Now this is a feat that is very commonly performed for exhibition purposes by conjurers, who usually have a confederate to communicate by some secret code the nature of the object, or have some other prearranged device. But in such a test, entirely gotten up, arranged and inspected by scientists of acknowledged standing and with no confederates present to communicate,—indeed often with one of the scientific experimenters himself acting as percipient,—all possibility of any such fraud is entirely out of the question.

Various series or kinds of things were presented to be guessed. In one series objects of various kinds were used, in another playing cards taken at random from a pack, in another numbers of two figures, in another shades of colour, and the like. It is easy to calculate by the "Law of Averages" what chance there would be of a correct guess being made entirely by chance. For instance, if numbers of two figures were guessed, since there are just ninety such numbers, from ten to ninety-nine, it is plain that there would be just one chance in ninety of a correct guess being made, by chance alone. In all these tests it was found that the proportion of correct guesses was very much greater than the "Law of Averages" indicated as probable by chance. This would indicate that the guesses had not been made entirely by chance, but in some way the mind of the percipient had been influenced by the thing presented. As, however, all possibility of his getting any perception of it by any physical means was entirely cut off, his mind must in some way have gained the perception or impression of it without physical means. His mind must have had, in some as yet unknown way, the power of directly without physical means reaching

out and seeing the object, or else of receiving intelligence of it without physical means from the minds of some of the experimenters who did see it. That is to say, using the terms commonly employed, it must have had the power of either clairvoyance or telepathy. In some similar tests described by Dr. Thomson J. Hudson, it was found that when a card was the object to be guessed, and neither the experimenter nor any one else in the room knew what the card was no correct guesses were made, but when some one knew what the card was a large proportion of correct guesses were made, thus indicating that in that case it was telepathy that was exhibited.

In another series of tests, in which the conductor was Mr. H. G. Rawson, one person was made to draw some figure or geometrical shape, and another person, sitting at some distance and with no physical means of perceiving what was drawn, was also made to draw whatever was impressed upon her mind. Some very striking resemblances were produced in this way. In another case Mrs. Verrall, herself an able investigator, experimented with her nine-year-old child. The child was made to think intently of some object or scene and the mother drew whatever was impressed upon her mind and afterwards found out from the child what she had been thinking about. Some remarkable resemblances were obtained in this way also.

In other tests it was found possible to produce similar results by persons far distant from each other, even in different countries. Mr. Podmore mentions the case of an experiment by Rev. A. Glasdon and ■ Mrs. M——, one being in Switzerland and the other in Italy. I may also speak of some tests described by H. Addington Bruce in an article on "Spirits or Telepathy."¹ These were carried on to show by what is called "Cross Correspondence" the presence of spiritistic activity. The spirit was supposed to suggest an object or shape to one of the investigators in one place, and the other in a distant place, also by the direction of this spirit's control, was to make a drawing of what was impressed on her mind. Some suggestive resemblances were produced in that way,

¹ *The Outlook*, March 26, 1910.

though it is not plain why it would be more indicative of the work of a discarnate spirit than of telepathic connection between the minds of the two percipients.

Mr. Podmore in this connection recounted the case of what was at first supposed to be a very remarkable mathematical infant prodigy. When the child's mother gave him the most intricate and difficult problems to solve he would give the answer correctly almost as soon as she had finished giving the problem. It was later noticed, however, that in all these cases the mother knew the answer to the problem when she gave it to the child to solve. Afterwards when the child was tried with problems of which the mother did not know the answer it was found that he could do nothing with them. It thus seemed that the child was able in some way to read the mother's mind and get the answer there and then give it as though he had solved the problem.

One very important fact is brought out by Mr. Podmore that is also referred to by almost all experimenters in this line (p. 214). "The most fruitful and best established results (of telepathy) have been obtained *from entranced percipients*." He gives an account of some specially significant results that were obtained by experiments with hypnotized persons. In one series of tests the percipient was hypnotized and made to guess numbers of two figures from ten to ninety-nine. Out of 644 trials 117 were guessed correctly. As by the law of averages there would be but one chance in ninety of a correct guess this would indicate the probability of less than eight correct guesses if the results had been all produced by chance, whereas the results showed 109 more or fifteen times as many as could be accounted for by chance.

Another series of tests was made with the percipient or person who was to guess, in an entirely separate apartment and entirely isolated and separated by a wall from the person who selected the numbers, to make it specially certain that there should be no communication, conscious or unconscious, between them. Three different positions were tried. In one case the percipient was in an upper apartment over a mason work arch and the other person or "agent" below the arch. In the next trial the positions were just reversed, the "agent" above and the per-

cipient below. In the third case they were in different apartments, one being in the room and the other out in the hall or passage. In all 252 tests were made, numbers with two figures being used to guess. In 148 tests the persons were in what we may call position (1) with the percipient above the masonry arch and the agent below. In thirty-three cases they were in position (2) with the percipient below and the agent above, and in seventy-one cases they were in position (3) in separate rooms. Account was taken of five classes, (a) those that were guessed completely right, (b) those that were guessed with the correct figures but in the reverse order, as for instance forty-seven instead of seventy-four, (c) those in which the first of the two figures was guessed correctly and the second wrong, (d) those in which the second figure was guessed correctly and the first wrong and (e) those in which the guess was wholly wrong. I give below the result in tabulated form :

<i>Position</i>	(a)	(b)	(c)	(d)	(e)	<i>Total</i>
(1) - -	20	5	55	11	57	148
(2) - -	0	0	7	4	22	33
(3) - -	7	3	23	8	30	71
Total	27	8	85	23	109	252

No importance need attach to the difference of result in different positions as it was doubtless due to accidental causes, such as greater fatigue and the like. But the significant fact is that in all cases results were shown very far in excess of what could be produced by mere chance. More than one out of ten were guessed completely right while 116 more or nearly half had some approximate correctness, and only 109 or less than half were guessed entirely wrong.

Another book by the same author, Mr. Frank Podmore, "Apparitions and Thought Transference," also contains many instances and discussions bearing on this subject.

A book by R. Osgood Mason, "Telepathy and the Subliminal Self," beside some other phases of the activity

of the subconscious mind also gives instances and discusses this subject of telepathy. He accepts telepathy as a valid explanation to be first used wherever physical causes cannot account for any occurrence, and seems to make especial use of Mr. Meyers' conception of a "Subliminal Self" or an extension of our self or spirit far beyond the measure and limit of what is employed by and contained in our bodily activities.

Another book by Mr. Frank Podmore is "Modern Spiritualism" in two large volumes. He discusses the whole range of those supernormal experiences which are commonly presented by the advocates of the religious cult of spiritualism as indicating the activity and revelations of discarnate spirits. His position seems to be that as far as these are genuine they can all be accounted for by the action of clairvoyance and telepathy in the minds of living persons. In Chapters IX and X, Volume I and Chapter VIII, Volume II, he gives quite a number of interesting and significant cases of telepathy, clairvoyance and kindred experiences.¹

Mr. H. Addington Bruce in "The Riddle of Personality" gives quite a discussion of the character and work of the Society for Psychical Research. He is inclined to find the explanation of all the many supernormal psychological experiences, frequently reported, in telepathy and clairvoyance rather than in the activity of discarnate spirits. He thinks that the trend towards spiritualism and other extreme theories by Mr. F. W. Meyers and others of the society's earnest workers has called forth an unfortunate amount of adverse criticism and tended to obscure the very great amount of valid and valuable work that has been done by them.

"Personality and its Survival after Death" by Mr. F. W. Meyers contains a large amount of instructive material bearing on our subject. Quite a large number of interesting cases are cited, especially in Chapters IV and VI. As indicated above, Mr. Meyers is a believer in the communication of disembodied spirits with living men, and presents this material in this book as supporting that position. Whether we may agree with him that

¹ See also "After Death What," Lombroso.

it indicates the activity of discarnate spirits, or take the alternate view that it can all be accounted for by clairvoyance and telepathy by the minds of living persons, the material which he presents is well worthy of credence, and in either case it shows the mind to be capable of receiving impressions other than those that it receives by physical means.

Prof. J. H. Hyslop, in "Science and a Future Life" also, cautiously and with full recognition of the weight of the counter-claims of those who take the opposite view, sees proof that satisfies him of the fact of communication between departed spirits and the living. While giving considerable other material and instances drawn from other sources, most of the book is taken up with the results of the experiments with Mrs. Piper to which reference has already been made.

Dr. Thomson Jay Hudson has written a number of books dealing more or less with this subject, such as "The Law of Psychic Phenomena," "A Scientific Demonstration of the Future Life," "The Evolution of a Soul," etc. In "The Law of Psychic Phenomena" he insists on the power of the mind to act without physical means at a distance, both in the manner implied in telepathy and also in an effective way, that might have influence for instance in the curing of diseases, as claimed in the so-called "Absent treatments" of Christian Science.

In "The Evolution of a Soul," Chapter VI, he proposes to give the reasons which have led him to believe in the fact of telepathy. In the first place he says in brief the reason is his tendency to believe in human testimony. "When thousands of reputable men and women declare that they have experienced the phenomenon and witnessed it in others, and when hundreds of men whose reputation for probity and scientific attainment is international, aver that they have experimentally reproduced the phenomena of telepathy, I confess that I am very much inclined to believe what they say" (p. 181).

And yet like most other men of science who prefer to base their beliefs on knowledge obtained at first hand, he started out to test the matter for himself by a number of series of experiments covering all the various phases of the subject. His method was to treat with the several

classes of phenomena. As soon as he had sufficiently demonstrated by his experiments that a given class of phenomena could be produced without fraud he dropped that and took up some other class. Among others he tried the experiment of having a thoroughly blindfolded person guess the character of objects, playing cards and the like that were presented. He also had the same experiment tried with himself as the percipient, playing cards being used in one case. He was thoroughly blindfolded and for a long time tried in vain to become somnolent and get some distinct impression. As soon as he tried to turn his attention to any impression it would rouse him and the impression vanish. At last by extreme effort of concentration he managed to keep one impression long enough to see what it was. It was not a card but a row of real diamonds, and he counted that there were just ten of them. Of course he decided on the "ten of diamonds," which was in fact the card which had been chosen. In all he made five trials and only made one mistake of calling the "five of clubs" instead of the "five of spades." This was by an inexcusable blunder, for he saw them in his impression partly imbedded in the ground, and as the upper part of the two spots look much alike he called them clubs, instead of following the hint of their being in the ground to call them spades. A number of others tried the same experiment with a sufficient number of successes to prove the presence of telepathic influence, and since then he had seen hundreds of similar experiments with the same results.

He mentions one experiment he tried of a very peculiar and interesting character. A public exhibition of telepathy was being given in the town by a man and his daughter. Blank slips of paper were distributed to persons in the audience, and they were to write something on them, sign it and put it in their own pockets. The young lady was then hypnotized and proceeded to call the names signed to the messages and read what was on the paper in the different persons' pockets. A friend was present the first night and told Dr. Hudson what was done. He decided to make a very peculiar test. He had his friend go to the performance the next night, and

arranged with him that he would stay at home and fix some playing card in his mind which he would try to communicate to or through him by telepathy. The friend then at the performance was to write on his slip of paper, "A friend has sent me by telepathy the name of a playing card. Please tell me what it is," and sign his name; the friend however did not know what card was chosen but the supposition was that Dr. Hudson was to communicate it by telepathy to his subconscious mind, and from there the operator was to receive it and reveal it. It was very late in the performance before the operator got to this case, and she complained of being very tired. Yet she called the name and read the message on the paper correctly, and said she thought the card was red and was diamonds, but could not tell distinctly which one. The operator promised to hypnotize her again and send the answer by mail. He did so and said she was still tired and had difficulty in seeing clearly but thought it was the nine of diamonds. In reality the card chosen was the ten of diamonds.

I will give as the last reference a little book which gives an account of the experiences of the Rev. C. B. Sanders called "The Sleeping Preacher," not that the case is any more strange or important than many others, but because several of my own intimate friends personally knew this man and his strange case, and many of the witnesses whose names are subscribed to the reports that are given. He was a very earnest, successful and respected minister in the Cumberland Presbyterian Church, whose character was beyond suspicion in every respect and his abilities above the average. For about twenty years he had from time to time strange spells in which he seemed to go into a secondary or subconscious state with wonderful clairvoyant or telepathic powers and with the general heightening of his mental faculties often characteristic of the hypnotic state. These spells were accompanied with great pain, and with an opening of the sutures of his skull and other distressing symptoms. They were a great grief and trial to him in other ways, as he thought they would subject him to suspicion.

Although these strange experiences were constantly occurring for nearly twenty-two years, from 1854 to 1876,

Mr. Sanders had the greatest aversion to publicity, and succeeded in preventing anything being published about them till in the year 1875, September 15th an article was published in the *Nashville American* and November 26th one in the *Cincinnati Tribune*, both of which were quite extensively copied by the press. Seeing that the case was already being made public, and in unsatisfactory form, he requested a friend, the Rev. G. W. Mitchel of Athens, Ala., to prepare and publish an authentic and accurate account of the facts, which he did in a small volume published in September, 1876, about four months after the time that these strange experiences of Mr. Sanders' ceased.

The book is made up almost entirely of signed statements of various persons who had witnessed and testified to some of the remarkable things done by Mr. Sanders when in the peculiar trance condition. In all the testimony of sixty-nine persons is recorded in the book. They are all persons of irreproachable character and intelligence, many of them of the highest standing,—clergymen, lawyers, doctors, men and women of the leading families in the communities concerned. The book is entitled, " $X+Y=Z$ or The Sleeping Preacher," the peculiar formula being the strange signature which he would always sign to any communication written while in the trance state.

It would be impossible in the limits here to give any full account of the things done by the Rev. C. B. Sanders when in this state. The first time that he was known to show this strange power was in 1854 when he was boarding with a family by the name of Harlow and attending school in Elkton, Tennessee. He announced one afternoon that there would be a funeral there before tomorrow evening though not any member of the family. Within an hour a gentleman came and requested permission to bury a corpse in their private cemetery, which was granted. The death occurred three miles away, and no one there had even heard of it. Later on quite a number of occasions he reported the death of persons at a great distance at the very hour that the death took place, often without any previous knowledge of their sickness. Other things were also reported in the same

way with the same accuracy and correspondence of time, for instance in one case he reported a fire that had broken out in a distant village, giving exact details of the buildings that were burning, all of which was later verified. Quite a number of times he located lost money, and went directly to the place, sometimes a long distance away, and picked it up. In one case he reported to friends a private conference and conversation they had held shortly before in a distant city. He often reported the substance of sermons which were being preached by his brother ministers at some distant place. He often told persons the contents of letters they had received or written without having seen them. He diagnosed accurately the diseases of persons at a distance whom he had not seen. These and numbers of other equally strange and supernormal things were constantly being done through a period of over twenty years, and witnessed to in signed statements by scores of persons of the highest character and intimate acquaintance with Mr. Sanders.

Now while it is conceivably possible in almost any of these instances to imagine a way in which some such thing could be done by fraud or legerdemain, yet on the other hand must be considered the perfectly irreproachable character of Mr. Sanders, which is abundantly witnessed to, he having spent all his life in a comparatively limited region, and was still living there at my last information. In the second place no adequate motive could be assigned, as the occurrence of these things was a great embarrassment and distress to him, and he tried, and for twenty years successfully, to keep them from wide publicity. Moreover his conduct when in this trance state was perfectly irreproachable, and some of his ablest and most fruitful religious work was done in that state. In the third place as we have already seen above many able investigators have fully satisfied themselves, by carefully conducted psychical laboratory experiments, that the human mind does possess powers adequate and suited to produce all these different kinds of results which Mr. Sanders is reported to have experienced.

Many of the witnesses and observers were, before actually seeing the phenomena, quite sceptical. Such

things were directly contrary to all the religious as well as scientific opinions of the community. Some of the witnesses were distinctly critical and careful in testing what they saw. One witness, the Rev. M. B. DeWitt, says that while he had seen many things that were satisfactory to his own mind and fully sufficient to convince any one, yet he kept constantly looking out for some incident that would be entirely incapable of a natural explanation and so a perfect demonstration of the possession of special powers. He said he was satisfied that two were of that fully demonstrating character. One of these was when he had sent a letter to Rev. G. W. Mitchell (the author of the book), and before it had been received, Mr. Sanders had seen Mr. Mitchell and told him all the contents of the letter, even to minute particulars. The other was a little trivial incident, but for that reason, and by its character, the more convincing.

Rev. Mr. Sanders was confined to his bed with a dislocated thigh, in the home of Mr. John W. Pruitt of Meridianville, Ala., and Rev. Mr. DeWitt was living about a mile and a half from the village. He started one day to take to Mr. Sanders a bowl of custard which his wife had made for him, and also had in his other hand a sack of peas. He had to cross a rail fence on the way, and as it was quite unsteady, and both his hands were full, he got himself into a very precarious, and doubtless also very ludicrous position before he got safely over. This fence was on the other side of a wooded hill and over half a mile distant from the house where Mr. Sanders was lying, and entirely beyond all possibility of sight. He was only about ten minutes in reaching the house, having stopped only once to speak to a man for a minute by the way. As soon as he came in and shook hands, and without anything having been said on the subject, Mr. Sanders began to laugh heartily and to chafe him on the ludicrous spectacle he presented and the hard time he had crossing the fence. In a signed statement which is also given, Mr. J. W. Pruitt also certifies that he was with Mr. Sanders in the room for some time before Mr. DeWitt arrived and he had had no communications from any person, but about ten or fifteen minutes before his arrival, apparently just at the moment when Mr. DeWitt

was on the fence, Mr. Sanders being in his trance condition at the time had suddenly burst out laughing and explained that he was laughing at Mr. DeWitt who "was having a hard scuffle to keep from falling off the fence."

This is but a sample however of scores and hundreds of similar cases of supernormal knowledge, many of which were of equally convincing character. On one occasion Dr. W. T. Thach after treating a patient came to the house in the village about two and a half miles away, where Mr. Sanders was staying at the home of Mr. J. W. Woodroof who certifies to the report. Mr. Woodroof asked Dr. Thach about the patient and Dr. Thach said the case was critical, and then turned and asked Mr. Sanders, who was in one of his trances at the time, how the sick man was doing. Mr. Sanders answered that he was no worse than when he left, but that his wife had made a mistake in giving him the medicine, two powders of different character having been left, and she had given the wrong one first, but he added that he thought it would do no harm. On being asked he told the composition of each of the powders. All he said was entirely correct, and on calling the next morning the doctor found the wife quite anxious because she had given the wrong powder first and she had been on the point of sending for him, but found no unfavourable results to follow, so did not.

Mr. Sanders when in his trance state used to make memoranda in a book of many things which he saw and of which he had no recollection when he came out of the state. On one occasion a deranged woman had escaped from her home about seven miles from where Mr. Sanders was staying. After her friends had searched for some time and found no information of her one of them came to the house where he was staying. On looking over his book he found a memorandum of a deranged woman having been at a certain house at a certain hour, and said that by going there they could get track of her. They did so and got on track of her and later found her. The following night in his trance state Mr. Sanders reported that the woman was found, and next morning the report was found to be true. This was certified to by Captain M. B. Hampton, a member of the Alabama legislature, at whose house Mr. Sanders was staying at the

time. Captain Hampton also relates a number of other equally significant incidents.

All the above literature has been cited and incidents quoted to show that it is not mere credulity and superstition to imagine that the human mind can get information and receive messages from other minds directly without the use of physical means. If it be asked, Why then do not more men or all men also have this power? Why should certain obscure persons exhibit such a great faculty in that sphere while other minds, even of highly trained psychologists, seem to exhibit none at all? Or again, in these experiments in thought transference, why should some experimenters get no satisfactory results from the same kind of experiments from which others claim to get such conclusive demonstration of telepathic activity?

The answer is very obvious and lies in the fact that in all its faculties and powers there is extreme variety in the capacities of different human minds. Also in the fact that telepathic activity is confessedly a difficult and delicate operation. Take, for instance, the experiment of guessing blindfolded an object upon which other persons present are concentrating their minds. Any ordinarily sceptical investigator on conscientiously trying this experiment and making an entire failure and then carefully trying it again and making another complete failure, if he had the exceptional perseverance to keep at it till he had tried faithfully ten or twelve successive times with complete failure every time, would certainly by that time give it up and be fully convinced that he had proved that there was nothing in it and those who claimed they effected results were either deceiving or deceived. But how many persons first learning to play on the flute or cornet have been able with the first ten or twelve puffs to make any noise on the instrument at all? And that is an operation immensely more easy than this of telepathy or adjusting and manipulating the mind so as to recognize and perceive totally unaccustomed kinds of impressions. Ten or a hundred complete failures, in either case, would not necessarily prove the feat impossible, especially after hundreds of other persons had fully succeeded at it.

Again, what a difference there is in different minds as

to memory, reasoning power, artistic sense, musical sense and every other faculty. Take the cases of "Blind Tom" and "Blind Boone," illiterate negroes and practically idiots in other directions, but able to play the most difficult and intricate pieces of music with the most complicated harmony, after hearing them played by some one just once. On the other hand I have known highly educated and cultured persons so entirely devoid of musical sense that they could not distinguish any difference of pitch when different notes were struck on the piano.

It could not therefore be counted at all strange or unaccountable if certain special individuals, like Mrs. Piper or Rev. C. B. Sanders were found to have a very full endowment of a faculty which others possessed in an immensely less degree or practically not at all, or that some persons should easily succeed in experiments in which others should totally fail. The whole question is one that can only be determined by candid investigation, and one that certainly has been proved worthy of investigation. And it is a fact not without significance that as a rule those who have investigated it the most candidly and thoroughly have declared their conviction that telepathy or direct thought transference is a proved fact.

In the text it was pointed out that in the Bible there are many cases where men believed themselves to be receiving communications from the mind of God directly. To a person who believes that the great mind of God is everywhere immanent in the world there would be no difficulty in believing that telepathic communications might be received from his mind as readily as from any other, if telepathy is a fact. It is also very significant, as pointed out, that in many of the instances where persons were reputed to have thus received communications direct from the mind of God in a manner similar to what we call telepathy they were in the entranced or secondary mental condition, which, as we have seen, investigators show to be the most favourable to telepathic perception.

Appendix C

MULTIPLE PERSONALITY

ONE of the most startling facts revealed by the new psychology, and one which has been completely established by it is the possibility of multiple personality. In saying that I am speaking merely of the phenomenon, without implying anything as to its explanation or the nature of the fact that lies behind it, which is as yet very little understood. It is recognized that there can be in a single person a state which, as regards his own sensations as well as the appearance seen by others, seems practically the same as though there were two or more distinct persons acting, perceiving and thinking.

As to the nature or cause of the phenomenon, we have no knowledge as yet. At best we can only advance theories and hypotheses. Those who seek to express all mental phenomena exclusively in terms of physical or brain changes naturally consider that it consists in some interruption in the connections between different centres or regions of the brain. Some with Ribot¹ would go so far as to say that there is no real unity in the human individual, but only a sort of "Colonial Unity," the coalescing together in some way of independent sensations attached to different organs or growing out of different acts, in some way that yields the seeming sensation of unity, but any part of this might be separated off at any time just as a piece might be broken from a large rock or certain provinces break off from the parent government and form a separate state.

To those who are convinced as most of us are of the existence of a mind or soul as a concrete entity exer-

¹ "Diseases of the Personality."

cising guidance over and being influenced by the activities of the body or of the brain cells, some other explanation would be more plausible, which reaches to it and takes it into account as a chief producing cause. Of course, unless we did believe thus in the real existence of a human soul, there would be no call to discuss the possibility of plurality in the divine Spirit, for we would not believe even that such a Spirit exists.

But in any case, the explanation is not essential. It is merely the observed fact that we wish to use, namely, the observed and experienced fact that this plurality of consciousness does exist. For in comparing these facts with the character of God as portrayed in the Bible what we find portrayed there is only the recorded appearance of plurality or objectivity of person to person, without any declaration as to the fundamental fact which lies behind that appearance. What we find there is the record, for instance, that Jesus, while claiming identity with God, spoke of certain acts, feelings and purposes as being acts, feelings and purposes of God, and yet as not being His own, or as being directed towards Him. If we can find, then, in the case of some man, a consciousness which persistently thinks, feels and believes that certain acts are the acts of another person from the person who performs the acts it is conscious of, and also in connection with that same man a consciousness that remembers and thinks of those acts as its own and has no remembrance of the other acts which the other consciousness remembers, but feels and thinks of *them* entirely as those of another person, we have the complete equivalent of all the plurality or "Trinity" that is expressed in the Bible with regard to God.

There is considerable literature on this subject. There are a number of quite noted special cases that have been observed and recorded, and considerable work done in the psychological laboratory, with both hypnotized and normal subjects, showing results illustrating this condition or state. It is a very common phenomenon in insane subjects. Almost any alienist will have observed many cases, where the subject feels himself to be two persons or that another person is some way inside of him and interfering with his life. I have not referred to any of

these cases, however, but confined the references entirely to persons of sane and sound intelligence to avoid prejudices, and yet the phenomena of the insane mind demonstrate the possibilities of the human spirit just as truly as the acts of the sane, and it is the *possibilities* of the human spirit that we are investigating, namely, whether it is possible for the human spirit to present to itself and to others the appearance of plurality, or whether, as formerly taught,¹ "It is impossible that a person should be in part the same and in part different, because a person is a monad, and is not divisible into parts."

A popular discussion of the subject will be found in *The Woman's Home Companion*, November, 1905, by Prof. J. H. Hyslop of Columbia University, giving a number of interesting examples.

In *The Ladies' Home Journal*, October and November, 1908, a number of examples and a discussion of the subject is given by J. Corbin.

In "Diseases of the Personality," by Th. Ribot, the author treats the subject entirely from the standpoint of biology and brain structure, and seeks to find its explanation wholly there.

In "Double Consciousness," by Alfred Binet, the author gives a more general presentation of the actual facts without dogmatizing as to their nature and cause.

In "The Subconscious," by Professor Jastrow, quite a number of cases are presented and discussed.

R. Osgood Mason, in "Telepathy and the Subliminal Self," also gives a number of cases illustrating this phase of abnormal mental phenomena.

In "Psychotherapy," by Prof. Hugo Munsterberg, a number of instances are presented and discussed, illustrating what the author would call, "Two simultaneous groups of the content of consciousness."

Prof. Boris Sidis, in "The Psychology of Suggestion," gives quite a thorough discussion of the subject with many experiments both with hypnotic and normal subjects.

In a later book, "Multiple Personality," in collaboration with S. P. Goodart, he discusses the question in con-

¹ Cf. "Reid's Essay on the Intellectual Powers of Man."

nection with the strange case of Rev. Thomas C. Hanna, which had come directly under their observation and been treated and cured by them.

This last named case will give a very good illustration of the subject, for while this doubling of consciousness is a very common occurrence in insane subjects, this case, as well as quite a large number of other carefully observed and well attested cases occurred where the individual was in all respects, with this exception, perfectly sane and normal.

Rev. Thomas C. Hanna was a Baptist clergyman of university education and broad culture. One day he met with a severe accident, was taken up unconscious, and when he came to consciousness it was with a mind perfectly blank, without any memory of his previous life or apparently any knowledge of anything. He was apparently, in every respect, mentally in the condition of a new-born child. He learned with great rapidity, however, and before long could walk, talk, read and do most of the acts of ordinary life. As far as a thorough examination could detect there was no lesion or abnormality of any other kind, and he was perfectly healthy, but as far as his consciousness indicated he seemed to have begun his life at the moment when he first came to consciousness after the accident.

From various indications they were led to believe that the former memories were not perished but merely submerged in the region of the "Subconscious." At length as the result of what they would call "Hypnotoidal treatment" there came a transformation and all these old experiences came into consciousness again just as in his old life. But at the same time all the experiences he had gained since the accident had entirely vanished from his consciousness.

By continuing the treatment he was again thrown into the secondary state, with those experiences received since the accident alone in his memory and the others all vanished. Thus he was made to alternate from one to the other of the states, and the memories of the experiences he had received in each of the states were all connected together by themselves in one separate stream of consciousness. All that he experienced in one state, to-

gether with the things experienced directly after the accident, would form one stream of consciousness, as if they were the life of one person and his whole life, and he would know of no other when in that state. In the same way, all that he experienced in the alternate state, together with all his experiences before the accident, would form another continuous stream of consciousness, as if that were his whole life and in this state he knew nothing of the things that had happened in the other state. Later, however, they were able by a peculiar kind of treatment to succeed in merging the two streams of consciousness and the two states into one, so that the patient was wholly restored to his normal condition, with all the events of both states in the same consciousness and memory.

Another remarkable and very similar case is reported by Prof. Wm. James¹ under whose observation and treatment it came. Rev. Ansel Bourne was a preacher living in Greene, R. I. On January 17, 1887, after drawing a sum of money from the bank, he disappeared. Suspecting foul play, his friends searched for him in vain for nearly two months. Meantime he was living quietly in Morristown, Pa., apparently without any knowledge of his previous life, and was keeping a little confectionery store which he had opened there. He called himself A. J. Brown, and as far as known showed no special peculiarities. On the morning of March 14th he woke up greatly frightened, seeming unable to remember any of his surroundings or where he was. The drawing of the money from the bank and the other events in Greene seemed to have occurred just yesterday. To the inmates of his boarding-house he said that his name was Ansel Bourne and he knew none of them and knew nothing about the confectionery shop or any of the events of the past eight weeks. They thought he had gone insane, but on communicating with the place he indicated as his home his nephew came and identified him and took him home.

When thus restored to his natural state he had no remembrance of anything that had occurred during the time from January 17th to March 14th. Later Professor

¹ "Principles of Psychology," Vol. I.

James subjected him to hypnotism to test whether there was any memory of that period in his subconscious memory, and found that when thus hypnotized he had the memory of all that period, but he had no memory of his previous normal life as Ansel Bourne. By repeated treatment he could be made to alternate from one state to the other. There were two distinct memories and two personalities in the man. An attempt was made to merge the two personalities and make the memories continuous as in the last mentioned case, but it was unsuccessful.

Another very similar case was observed and reported by Dr. Gilbert. Mr. A——, a prosperous merchant and tinner, doing a good business, suddenly disappeared from home one day, and his whereabouts were unknown for two years. During that time he was wandering about the country, earning his living working at his trade, and apparently without any knowledge of his previous history. He was quietly working at his trade in a tin shop somewhere in the South when one day suddenly the consciousness of all his former life before he left home returned to him. He now knew nothing of the events of the two years in which he had been in the secondary condition, and knew none of his surroundings or of his companions in the shop. He succeeded in returning home, however, to the great joy of his friends and family who had long thought him dead.

Professor James also relates a strange case, which is more fully reported in *Harper's Magazine*, May, 1860. Mary Reynolds, early in the last century, went with her parents out into the then Western wilderness to make their home. Soon after she was taken with a strange spell in which she seemed like another person. She was quite different in disposition, and had no remembrance of any of the things that had previously happened to her. A great many strange things are related of her actions and condition while in this state. After a while she returned to her normal state with all her normal memories but with no memory of what occurred in this state. But before long she returned to this secondary state again, with only its limited stream of memories. For fifteen or sixteen years she thus alternated from one state to the other, in each state having a memory of the things which had

occurred in the different recurrences of that state, but no memory of the things that had occurred in the other. At the end of that time she seemed to settle down in the secondary state, and lived a normal life in that state for the last twenty-five years of her life.

Mr. F. W. H. Meyers in "Personality and its Survival After Death" gives quite a large number of cases of a somewhat similar nature. In one case (reported by Dr. Azam), a girl, Felida X—, who had become moody and melancholy, suddenly developed what seemed to be a new personality. In this state her health was much improved and she was more cheerful and bright. These two states continued to alternate for many years; in the first state she had only the memory of things that happened while in the corresponding state, and no memory of the things that occurred while in the other, secondary state, but in the secondary state she had the memory of both. The secondary state gradually became longer and longer in duration, till finally it came to occupy nearly all the time, the primary state coming only for a few hours at a time at intervals of a month or so.

In another case (230 C), a young woman who had become hysterical was treated with hypnotism, which threw her into another personality, with a different consciousness and memory, but the disease was entirely gone. As soon as she returned to her normal personality and consciousness the disease returned. As it was of a very painful and threatening character, to preserve her life it was deemed desirable to keep her continuously in the secondary state.

Are all these merely instances of a person alternately forgetting and remembering certain things, or were there really two centres of consciousness, the forgotten portions of the life being in the possession of one consciousness or personality while the other portions were in the possession of the other? Some of the following cases seem to fully cover this point, proving that there were really two centres of consciousness with their separate contents co-existing at the same time.

Mr. Meyers reports at some length (230 A) a case from the experimental laboratory of Professor Janet. In the case of this subject,—Madame B—, the secondary state

was produced by hypnosis. After a time, however, it developed a store of memories entirely separate from those of the primary personality and began to act spontaneously. He relates among others one little trivial incident illustrating the fact of both "Personalities" or consciousnesses existing and being conscious at the same time. The subject while in the hypnotic state was given a post-hypnotic suggestion to take off her apron at a certain time when she woke up. After coming out of the hypnotic state, at the time indicated, she began to untie her apron, but when Mr. Janet asked her why she was doing so she was confused, said she did not know, and tied it on again. But a moment later she again untied it and took it off. Next day she was hypnotized again, bringing the secondary self into consciousness, and she immediately asked him why he had interfered when she was trying to take off her apron, but adding in triumph that she had succeeded in making her (the No. 1 self) take it off.

Another significant circumstance was noted at a later time. When her primary self was occupied or distracted by talking or other things her hand, under the direction of this secondary self, would write letters and do various things, which the primary self did not know anything about. Still later a third personality emerged, separate and with a separate memory from both the others. It first emerged in the form of unconscious acts, but later was brought to consciousness by hypnotism, and had a memory of these previous unconscious acts. It seemed to know all the thoughts of both the No. 1 and No. 2 selves, but they did not know its thoughts.

One of the most noted cases of multiple personality was that of "Miss Beaucamp" which was treated by Dr. Morton Prince of Boston. It has been quite frequently described by various writers in the popular magazines and elsewhere, besides being fully reported by Dr. Prince.¹ In this case four distinct personalities developed and alternated in the control of the one individual. Some of them knew nothing of the thoughts or ex-

¹ Cf. *Ladies' Home Journal*, November, 1908, *Woman's Home Companion*, November, 1905, etc.

periences of any of the others. Some knew the experiences of some but not of the others, or knew the acts but not the thoughts, but each and all of them felt towards each of the others entirely as towards another person and treated them entirely with the same feeling of rivalry and separateness that two ordinary individuals might feel towards each other. A great many most remarkable things are reported illustrating this entire feeling of separate personality and rivalry by the separate consciousnesses. After a long treatment Dr. Prince ultimately succeeded in merging all four into one personality with a continuous memory uniting the content of all four states.

Mr. R. Osgood Mason in "Telepathy and the Subliminal Self" reports quite a number of interesting cases. In one case, observed by Dr. Voisin of Paris, five different personalities alternated in the same individual. The earlier ones had no knowledge of the experiences of those that arose later, though the later ones did have knowledge of the experiences of the earlier ones, yet as of entirely distinct persons.

He also describes the case of "Alma Z——" which came under his own observation. In this case a young lady, well educated, cultured and quite strong and athletic, became ill, and another personality developed, and alternated in her life with her original personality. Later a third personality also arose. The original personality had no consciousness or memory of anything that occurred while either of the other personalities were dominant, though they seemed to know all about its experiences as well as their own. They were entirely healthy and strong, were very fond of the first personality and took great pains to assist and care for her.

An interesting case, reported by Mr. Meyers,¹ was that of Miss Anna Winsor. Accompanied by a state of ill health various alternating personalities developed, and later it was noticed that first her toes and fingers, and finally her right hand showed a tendency to move automatically and independently of her will. It began to write, and wrote things of which the girl in her normal consciousness knew nothing. It finally seemed to develop a complete per-

¹ "Personality and its Survival After Death," 237 A.

sonality separate from the personality that reigned in and controlled the rest of the body. It was superior to the normal consciousness or personality in some respects, and gave it often very sound advice. But the normal consciousness always felt towards it and treated it as a different person, and often mistreated and injured it as though it was entirely some one else. There seemed to be here a clear case of the two personalities conscious and active at the same time. The same was true in the case cited above of Madame B—— observed by Mr. Janet. In that case the hand would write letters when the primary consciousness was engaged in other things and its attention distracted, thus showing that the two were both active at the same time.

Prof. J. H. Hyslop mentions the case of a Mr. R—— who was troubled with a nervous affection and trembling of his hand for which no doctors could find any relief or discover a cause. On being hypnotized it was found that many years before he had experienced great mental shock and distress at the time of the death of his wife, and his subconscious personality had been continually brooding over and agitated by it, though in his normal personality and consciousness it had ceased to be thought of. A little treatment and suggestion caused the subconscious self to stop thinking about the trouble, and the nervousness and trembling of the hand entirely ceased. Here, right along parallel with all his conscious life, this unconscious personality had been carrying on its stream of thoughts and feelings which had greatly affected his nervous system.

Mr. Alfred Binet in a book on "Double Consciousness" gives accounts of an extended series of experiments designed definitely to demonstrate in a simple yet conclusive manner the fact of two centres of consciousness *at the same time* in the same individual. His experiments are first with hysterical persons who have some anæsthetic region, as for instance one hand and arm which is entirely without feeling. Any excitement, pricking, pinching or moving of that hand is entirely unperceived by the individual, as is fully proved by tests. The hand is first hidden from the sight of the individual by a screen, and perhaps she is made to read or do something to entirely absorb her attention. A pen is then put into

this anæsthetic hand and it is moved so as to form some letter or form. After a brief interval the hand will take the suggestion and begin to move and make the same letter, and continue making it for some time. The individual in her normal self, as was proved, had no knowledge of the moving of the hand or that such a letter had been made, so the making of the subsequent letters must have been caused by something else other than her primary, conscious will.

To make sure that it was a designed action and not merely a reflex movement the act was made more complicated. The hand was made to write words and whole sentences. As a still more conclusive test it was made to write some very familiar word, such as the individual's own name, but with a mistake in the spelling. In this case the hand as it continued to rewrite it would hesitate at the wrong letter, and finally correct it, showing that there was a real process of thought behind the act, and it was not merely a reflex motion. In another instance the hand was made to write part of a word and would of its own initiative finish out the word, or when a letter was traced upon the back of the hand the hand would write it.

As a further proof that there was reasoning behind this anæsthetic writing he related cases observed by himself and others, where an anæsthetic hand concealed behind a screen, and the subject perhaps engaged in conversation, would write whole connected sentences, and in some cases whole paragraphs or essays on some subject. All the time the individual had no knowledge or consciousness of what was going on, or indeed that anything at all was being done by the anæsthetic hand.

Professor James in his "Psychology" recounts the case of a Mr. Sydney Dean, who, though in a normal condition, had the power of writing automatically things that his normal consciousness seemed to have no knowledge of. In this way he wrote extended treatises on philosophical subjects which he had no acquaintance with. When finished these were automatically signed with some other man's name. It seemed to him that there were two entirely separate selves, one that did the writing and the other the normal self.

Mr. Binet gives some experiments directly to prove that the possibility of this doubling of consciousness exists in normal and unhysterical persons. The method was to distract the attention of the subject by reading or some other way, having previously told her to leave her right hand entirely to him and pay no attention to what it was doing. Gradually he would begin to move the hand and make it go through some simple motion, as for instance making curls with a pen. When left to itself the hand would continue for some time making the same kind of curls, sometimes making as many as a hundred or more. The person was then told to notice what the hand was doing, and immediately the making of the curls grew fainter and stopped, and when he tried to induce the same movements later it was unsuccessful, as the mind seemed to be on the lookout for something of the kind. But again he gave the person a long and difficult sum to add up that taxed fully all her attention, and now he was able to induce the making of the curls just as at first.

The conclusion seemed to be plain that the secondary centre of consciousness and action continued to do the acts that were suggested to it when it was not interfered with and inhibited by the primary self, but when the primary self was not intently employed it noticed the attempt at movement in the hand and inhibited it. As Mr. Binet observes, the motion of the hand was less distinct when the attention was directed to it than when it was not. This is just the opposite of the normal conditions or results, and seemed to show that the only act of the primary mind in this case was to inhibit an act that had its source elsewhere.

An interesting result was noted in the case of Mr. Wm. L. Smith, a student in the Massachusetts Institute of Technology. He was given a planchette, the instrument of automatic writing, to write with. At first he made only unintelligible scrawls, but after a while two results were noticed. The writing became definite and intelligible, and the hand became anæsthetic. Pinchings, prickings or other impressions made on it were not perceived by the normal self, but they were perceived by the self that operated the planchette and it wrote remarks

about them. Thus as soon as an opportunity was given, a secondary self seems here to have developed, acquired consciousness and activity, and also to have appropriated to its own use, to the exclusion of the primary self, the man's hand.

Mr. Boris Sidis, in "The Psychology of Suggestion," Part II, gives quite an extended discussion of the whole subject, with many experiments and records of spontaneous cases. Quoting many of the experiments of Binet, Janet and others, he adds many of his own, all illustrating the fact, now quite universally recognized, of a separate stream or aggregate of consciousness besides that which we are conscious of in our daily life. Among others are some very significant experiments in post-hypnotic suggestion. A person is hypnotized and told that on awaking and after a certain arranged signal he is to do a certain thing. He does it just as it was arranged, and just at the right signal, though the waking self has no understanding of the case, perhaps does not even know it is being done, and is engaged in other acts at the time. Sometimes the arranged signals are made very complicated, requiring much close attention and thought on the part of the secondary self that notices them and acts on them, and yet they are correctly acted on, though all the time the primary self is actively engaged in talking or something else, and does not notice the signals at all. In one case the subject was to do a certain thing when the operator should clap his hands a given number of times. He clapped very faintly and at irregular intervals, and when questioned the primary self had not heard some of them and gave a wrong number, and yet the secondary self had counted correctly and acted on the right one. In one case the act was to be done at the forty-third clap, in another different things were to be done at the third, fifth, sixth, ninth, and sixteenth claps, in another when in repeating letters the same letter should be repeated twice in succession, in others when the sum, difference or product of two numbers spoken should equal a given number. All these were perfectly accomplished while the primary self had no knowledge of it. Such things as these require all the activities of a fully endowed mind, and yet, since the primary mind

knew nothing of them, they must have been done by a mind possessed by the secondary self, and while the primary self was also active in other things.

An interesting case was an experiment by Bernheim and M. Ligeois, undertaken to illustrate the properties of post-hypnotic suggestion. The subject, a girl of eighteen, was hypnotized and told that on awaking she would not be able to see a certain person present. This was entirely carried out, for on awaking she saw everything else but seemed to have entire oblivion to him and to everything that he did. Afterwards, by command she was made able to remember all that he had said and done, showing that some consciousness had perceived him all the time. In another case, under a similar post-hypnotic suggestion, the subject did not see the person or anything that he did or said in the first person, but if he made a suggestion impersonally in the third person it would be perceived and acted upon.

In these cases the two selves, the normal and the secondary or hypnotic self seemed to divide up the store of impressions that the senses brought, and by the agreed terms of the partnership the secondary self appropriated all those that came from this person while the primary self took all the remainder. That there were really impressions received from this person who seemed not to be seen was proved by the fact that they were afterwards restored to consciousness when the command was given. The same is shown in other cases of post-hypnotic suggestion, as for instance in the case cited above where M. Janet's subject was made to untie her apron without the primary consciousness perceiving it, yet when hypnotized the next day the secondary consciousness remembered it. Another proof is given where persons are hypnotized and told that on waking they will not remember anything they have done but will be able to write it, and when they awake have no remembrance, but are able with the automatic writer to write it all out perfectly.

All these experiments show the essential point of the two selves acting at the same time in the individual. The normal self is active in the normal way, perceiving, acting, speaking, and at the same time the secondary self is also active, perceiving things that the normal self

does not perceive, discriminating what things it may appropriate as its snare, also acting or writing down the things that it has experienced, of which the normal self has no knowledge. By a great variety of such simple experiments as these it is fully proved that the two selves or two centres and groups of consciousness may be existent and active at the same time in the same individual. When we turn then to the cases, such as Mr. Hanna, Ansel Bourne, Miss Beaucamp and many others, where the secondary self persisted for long periods of time performing all the functions of a normal person in a perfectly natural and ordinary way, alternating in time with the primary self, the inference is legitimate that in these instances also while the one self was in control the other self was not obliterated or non-existent, but was in existence, only not in control of the organism. Indeed many circumstances in some of these cases directly confirm this, as in the case of Miss Beaucamp, Alma Z—— and others the secondary self did seem to know and be concerned by the things done or experienced by the primary self, though always as things belonging to another person.

The question may arise,—Are there in all of us all the time these two complete selves or centres of consciousness and action which we see in hypnotism, one of them lying dormant through the greater part of the life but able to be called up into consciousness and action by suitable means? Or is the explanation that there is normally just one self and one consciousness existent, but there is a residual something, or some other agency, which is able to form a new centre of consciousness and new self in certain contingencies? Or is, perhaps, the true solution a combination of both these conceptions? The fact that three, four or more selves or centres of consciousness are capable of developing in certain cases would seem to favour this last supposition.

But in any case the answer to this question is not essential to our argument. As previously stated, it is sufficient for all our purposes that there is merely the appearance of more than one self or centre of consciousness observed in the life of the same individual in well authenticated cases. Merely that in well attested instances

the individual himself feels and thinks that the agent that performs certain of his acts is not the same agent that performs certain others of his acts, merely that the appearances are sufficient to warrant the personality active at a certain time in feeling that certain acts of the same individual proceed from a separate agent. If we have found that, and it certainly cannot be questioned that we have, we have found the complete equivalent in human experience of all the plurality that is asserted in the Bible teaching as to the divine Trinity.

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